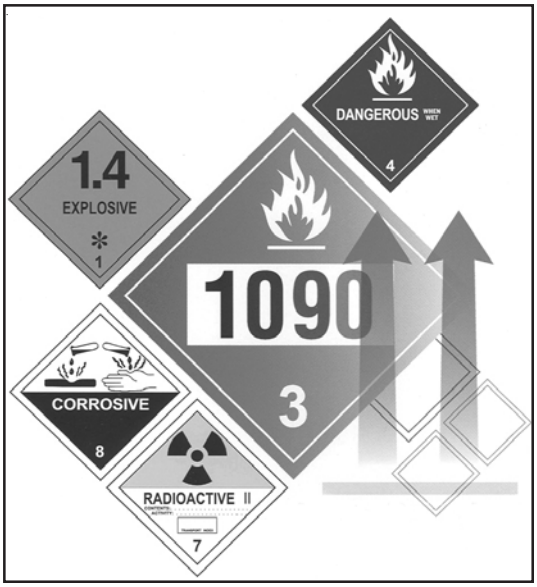
Volume 2:
Haz Mat
School Bus

Wisconsin Commercial Driver's Manual



August, 2004

Phone Numbers

General Information:

Milwaukee/Waukesha 414-266-1000

All other areas 800-924-3570

Oversize-Overweight ..... Nearest State Patrol District Office (see page 8)

Schedule Skills Test:

Statewide 888-368-9556

(except Madison & Milwaukee areas)

Madison Area 608-266-1442

Milwaukee Area 414-266-1028

Third Party Testers 800-242-2514

Federal Web Information

Federal Motor Carrier Safety Regulations, Rules and Notices ..... http://www.fmcsa.dot.gov/rulesregs/fmcsrhome.htm
FMCSA Forms ..... http://www.fmcsa.dot.gov/factsfigs/forms.htm
FMCSA Important Websites (FAQs for more Information) ..... http://www.fmcsa.dot.gov/factsfigs/postcardnu.htm
FMCSA Medical Advisory Criteria for Evaluation Under 49 CFR Part 391.41 ..... http://www.fmcsa.dot.gov/rulesregs/fmcsr/medical.htm
FMCSA Medical Reports ..... http://www.fmcsa.dot.gov/rulesregs/medreports.htm
FMCSA Motor Carrier and Driver Laws ..... http://www.fmcsa.dot.gov/rulesregs/fmcsr/laws.htm
FMCSA Motor Carrier Safety Programs ..... http://www.fmcsa.dot.gov/safetyprogs/saftprogs.htm
FMCSA Regulations: CDL Standards, Requirements and Penalties http://www.fmcsa.dot.gov/rulesregs/fmcsr/regs/383.htm
FMCSA Regulations: Driving of Commercial Motor Vehicles http://www.fmcsa.dot.gov/rulesregs/fmcsr/regs/392.htm
FMCSA Regulations: Qualifications of Drivers http://www.fmcsa.dot.gov/rulesregs/fmcsr/regs/391.htm
FMCSA Regulations: Revised HoursofService Regulations ..... http://www.fmcsa.dot.gov/Home_Files/revised_hos.asp
FMCSA Regulatory Guidance for the Federal Motor Carrier Safety Regulations ..... http://www.fmcsa.dot.gov/rulesregs/fmcsr/fmcsrguide.htm
Medical Exam Report Form ..... http://www.fmcsa.dot.gov/safetyprogs/spe_pdfs/Medical_Report.pdf
Office of Hazardous Materials Safety (HazMat Regulations and Interpretations) ..... http://www.myregs.com/dotrspa/

Wisconsin State Web Information

Change of Address ..... http://www.dot.wisconsin.gov/drivers/change.htm
CDL Medical Requirements ..... http://www.dot.wisconsin.gov/drivers/drivers/apply/types/cdlmedical.htm
CDL pre-trip and Road Tests ..... http://www.dot.wisconsin.gov/drivers/drivers/apply/types/thirdparty.htm
Commercial Drivers ..... http://www.dot.wisconsin.gov/drivers/drivers/apply/types/commercial.htm
Commercial Driving Schools List ..... http://www.dot.wisconsin.gov/drivers/drivers/gdl/cdschools.htm
Farm Service CDL Info and Study Guide http://www.dot.wisconsin.gov/drivers/docs/bds201.pdf
Hazardous Materials ..... http://www.dot.wisconsin.gov/drivers/drivers/apply/types/hazmat.htm
Motor Carriers and Trucking ..... http://www.dot.wisconsin.gov/business/carriers/index.htm
Motor Vehicle Laws ..... http://www.dot.wisconsin.gov/drivers/lawbook.htm
Oversize-Overweight ..... http://www.dot.wisconsin.gov/business/carriers/osow-permits.htm
School Bus or Alternative Vehicle Brochure http://www.dot.wisconsin.gov/drivers/docs/bds105.pdf
Schedule a Skills Test ..... http://www.dot.wisconsin.gov/drivers/drivers/schedule.htm
Third Party Testers http://www.dot.wisconsin.gov/drivers/docs/tp3.pdf
Transportation Administrative Rules ..... http://www.dot.wisconsin.gov/library/research/law/wisrules.htm

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VOLUME II

Notes

WARNING

If you drive a vehicle over 10,000 lbs. in interstate commerce, you may be subject to Federal Motor Carrier safety regulations.

Contact a State Patrol office for details (see page 8).

Penalty For Operating Without a CDL (for Drivers):

1st Offense - $200-$600 fine **OR** not more than 6 months in jail; 3 points

2nd within 3 years - $300-$1,000 fine **OR** 5 days to 6 months in jail; 3 points

3rd or more within 3 years - $1,000-$2,000 fine **AND** 10 days to 6 months in jail; 3 points

Penalty For Operating Without a CDL (for Employers):

The penalty for employers who place unqualified drivers on the road is a $2,500-$10,000 fine **OR** not more than 90 days in jail; **OR** both.

INTERSTATE COMMERCE:

Any trade, traffic or transportation in the U.S. between a place **in** a State and a place **outside** of such State **OR** is between two places in a State **through** another State or a place outside of the U.S. Special note: Transportation with a CMV within state lines is considered interstate commerce if the origin and/or destination of the load crosses state lines.

INTRASTATE COMMERCE:

Any trade, traffic or transportation in any State which is not described in the term “interstate” commerce.

WISCONSIN’S IMPLIED CONSENT LAW:

If a police or traffic officer asks you to take an Alcohol Concentration test, you must do so. If you refuse to take it, you will lose your driver license for one year.

NEW DRIVERS:

To drive in **intrastate or interstate commerce**, you must have passed a medical examination, within the past two years, in accordance with Federal Motor Carrier Safety Regulations 49 CFR 391, Subpart E. A **summary of medical physical qualifications** for drivers and a Medical Examiner’s Certificate (form BDS 199) is available in this manual on page 7, on the Internet at **http://www.dot.wisconsin.gov/drivers/forms/bds199.pdf**, or at your local DMV Service Center.

CMV and CDL Guide

(Examples)

1. A combination vehicle 26,001 or more pounds is a Class "A" CMV only if the trailer being towed has a gross vehicle weight rating, registered weight or actual gross weight of more than 10,000 pounds.

2. When the weight of the combination vehicle is exactly 26,000 pounds, it is not a CMV and does not require a CDL. Example: A tractor weighs 16,000 pounds and the towed unit weighs 10,000 pounds.

3. When the towing vehicle is 26,000 or less pounds and the towed unit is 10,000 or less pounds, it is not a CMV and does not require a CDL. Example: A tractor weighs 25,500 pounds and the towed unit weighs 8,000 pounds.

4. A CDL with an "N" tank vehicle endorsement is required only when the capacity of the tank is 1,000 gallons or more and the vehicle fits the description of a CMV.

5. A CDL with a "P" passenger endorsement is required when the vehicle is designed to transport or is actually transporting the driver and 15 or more passengers.

	Vehicle Examples					License Requirements			
	Tractor or Single Unit Truck	**Trailer**	**Carries HazMat**	**Is designed to transport 16 or more passengers including the driver**	**Is a School Bus**	**Is this a CMV?**	**Do I need a CDL?**	**What Class is it?**	**Which Endorsement?**
1	18,000#	12,000#	X			Yes	Yes	A	H
2	8,000#	20,000#				Yes	Yes	A	
3	26,500#					Yes	Yes	B	
4	27,000#	10,000#				Yes	Yes	B	
5	27,000#			X	X	Yes	Yes	B	P and S
6	29,000#			X		Yes	Yes	B	P
7	12,000#		X			Yes	Yes	C	H
8	25,000#			X		Yes	Yes	C	P
9	25,000#			X	X	Yes	Yes	C	P and S
10	5,000#		X			Yes	Yes	C	H
11	16,000#	10,000#				No	No	D	
12	26,000#	8,000#				No	No	D	
13	20,000#	8,000#				No	No	D	
14	10,000#				X	No	No	D	S
15	6,000#	20,000#				No	No	D	
	Tank Truck								
16	26,000#					No	No	D	
17	26,010#					Yes	Yes	B	N
18	26,000#	10,000#				No	No	D	
19	26,000#	10,000#	X			Yes	Yes	C	H - N
20	20,000#	10,500#				Yes	Yes	A	N

BDS207 2/2000

WisDOT
Bureau of Driver Services
P.O. Box 7920
Madison, WI 53707-7920
(608) 266-2237

Effective July 29, 1996: Drivers of commercial motor vehicles (CMV) operating in ***intrastate commerce*** must meet the federal medical standards and present a valid federal medical card when they apply for a commercial driver license (CDL) unless they have been grandfathered or are exempt by federal or state law.

What is Interstate Commerce? Any trade, traffic, or transportation in the U.S. which is between a place in a State and a place outside of such State, or is between two places in a State through another State, or a place outside of the U.S. **Note**: Transportation with a CMV within state lines is considered interstate commerce if the origin and/or destination of the load crosses state lines.

What is Intrastate Commerce? Any trade, traffic, or transportation in any State which is not described in the term "interstate commerce."

Is there a simple definition of commerce? Everyone in a CMV is considered to be in commerce unless they are exempt (driving for a political subdivision or driving a school bus).

Who was grandfathered? Drivers who had a Wisconsin CDL prior to July 29, 1996. However, those drivers will lose their grandfathered status if their CDL is revoked on or after July 29, 1996.

What are the benefits of being grandfathered? Grandfathered drivers are not required to have a federal medical exam or meet federal medical standards to qualify for a CDL which allows driving in intrastate commerce. Grandfathered drivers must still meet the state CDL medical standards such as visual acuity of 20/60 in the best eye. However, if they don't meet the state medical standards, drivers are allowed to appeal to the Medical Review Board.

Can grandfathered status be transferred from one state to another? No.

Do CMV Drivers employed by a political subdivision need a federal medical card? No. Drivers employed by any political subdivision (federal, state, county, city, township or village) operating a CMV owned by the political subdivision are exempt from the federal standards.

Do school bus drivers employed by a school district or private contractor need the federal medical card? Drivers employed by a school district and driving a bus owned by the district are exempt from the federal standards. They may cross state lines to transport students between home and school or when driving for curricular or extracurricular activities and charter trips.

Drivers employed by a private contractor and driving a bus owned by the contractor are exempt from the federal standards while operating within Wisconsin and when crossing state lines to transport students between home and school. A valid federal medical card is required when operating across state lines for curricular or extracurricular activities and charter trips.

Are CMV drivers operating a passenger bus exempt from federal medical standards? No. Drivers needing a "P" endorsement who do not have the federal medical card and are not grandfathered will be issued a license with two restrictions ("No CMV Operation in Interstate Commerce" and "No CMV Operation in Intrastate Commerce unless Exempt by State or Federal Law").

For drivers needing a "P" endorsement, such as those driving buses owned by a municipality (which is exempt), having both restrictions is fine. For those driving buses for a private human service agency (which is not exempt), "No CMV Operation in Interstate Commerce" and "No CMV Operation in

Intrastate Commerce" restrictions will not be acceptable and they will need to present the federal medical card, unless grandfathered, to avoid these restrictions. Drivers must know the type of operation involved to determine if they need a federal medical card.

Can drivers with an instruction permit (CDLI) with a "P" endorsement, practice operating a school bus without a federal medical card? Yes, they may practice in the school bus when accompanied by a qualified instructor or a properly licensed person 21 years of age or older who holds a valid license authorizing passenger vehicle operation. However, they may not transport passengers.

Can drivers with a commercial instruction permit (CDLI) practice operating a truck without a federal medical card? No, if the vehicle is owned by a commercial driving school or an employer who is not a political subdivision.

Yes, if the vehicle is owned by a Wisconsin Technical College or an employer who is a political subdivision.

What happens to drivers who don't pass a vision test, yet have a federal medical card? They will be referred to a vision or other appropriate medical specialist. If issuance continues, the license will have the "No CMV Operation in Interstate Commerce" restriction and, if the driver is not grandfathered, the "No CMV Operation in Intrastate Commerce" restriction.

What type of driving can drivers perform if they were not grandfathered and do not have a federal medical card? They can drive for exempt groups (political subdivision or school districts, if they meet the Wisconsin school bus driver standards or are approved by the Medical Review Board).

Do Drivers age 18, 19, and 20 need a federal medical card? Yes, if they wish to operate a CMV in intrastate commerce and have not been grandfathered or are not exempt by federal or state law. If they present a federal medical card their CDL will be issued with the "No CMV Operation in Interstate Commerce" restriction because federal law does not permit a person under age 21 to operate a CMV in interstate commerce.

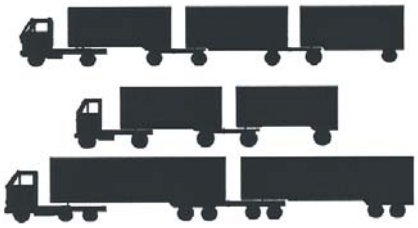
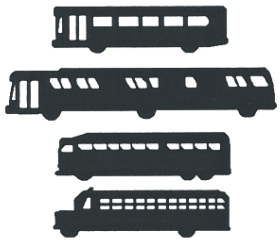
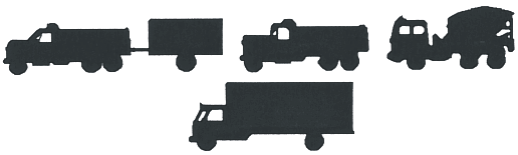
Who can appeal to the Medical Review Board? Drivers who are grandfathered may appeal to the board for intrastate driving. Also, new drivers who plan to drive for the exempt groups (political subdivision or school districts) may also appeal to the board. The board cannot make any exceptions to the federal standards. Any person who is required to have a federal medical card may not appeal to the board.

If not grandfathered, can a person with insulin dependent diabetes get a CDL for intrastate driving? Yes, if they file with the DMV Medical Review Unit, two satisfactory medical reports from two physicians. They will be issued a CDL with restrictions, "No CMV Operation in Interstate Commerce" and "No CMV Operation in Intrastate Commerce Unless Exempt by State or Federal Law". They will also get a letter to carry, while operating a CMV, that states they have qualified for this exemption.

Other Questions? Call 608-266-2327 or 608-266-0428.

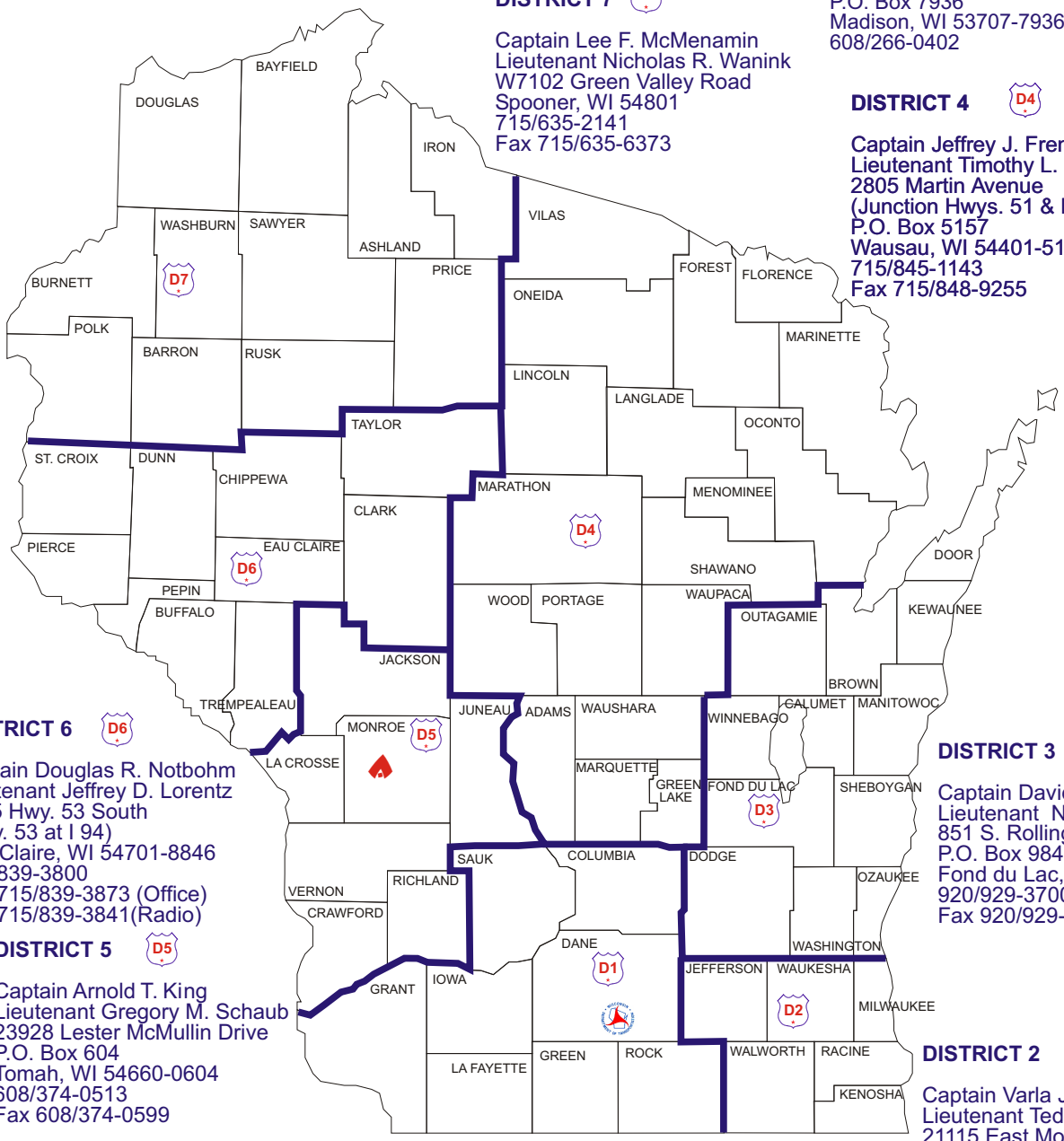
How to Use This Manual

(This page includes both Volume I and II section information)

If you want to get a license to drive this type of vehicle or a similar tank vehicle	Study these sections of the driver's manual
	Section 1: Introduction Section 2: Driving Safely Section 3: Cargo Section 5: Air Brakes Section 6: Combination Vehicles Section 7: Doubles & Triples Section 9: Haz Mat (if needed) In Volume 2
	Section 1: Introduction Section 2: Driving Safely Section 3: Cargo Section 5: Air Brakes Section 6: Combination Vehicles Section 9: Haz Mat (if needed) In Volume 2
	Section 1: Introduction Section 2: Driving Safely Section 3: Cargo Section 4: Passengers Section 5: Air Brakes (if needed) **Note:** School Bus information is found in Volume 2
	Section 1: Introduction Section 2: Driving Safely Section 3: Cargo Section 5: Air Brakes Section 6: Combination Vehicles (If needed) Section 9: Haz Mat (if needed) In Volume 2
(CDL required only if these vehicles are used to haul hazardous materials) 	Section 1: Introduction Section 2: Driving Safely Section 3: Cargo Section 9: Haz Mat (if needed) In Volume 2

If you want a tank vehicle endorsement, also study Section 8.

WISCONSIN DIVISION OF STATE PATROL DISTRICT MAP



Bureau of Transportation Safety (BOTS)

Major Dan Lonsdorf
4802 Sheboygan Avenue, Rm. 951
Hill Farms State Trans. Bldg.
P.O. Box 7936
Madison, WI 53707-7936
608/266-0402

DISTRICT 7

Captain Lee F. McMenamin
Lieutenant Nicholas R. Wanink
W7102 Green Valley Road
Spooner, WI 54801
715/635-2141
Fax 715/635-6373

DISTRICT 4

Captain Jeffrey J. Frenette
Lieutenant Timothy L. Carnahan
2805 Martin Avenue
(Junction Hwys. 51 & NN)
P.O. Box 5157
Wausau, WI 54401-5157
715/845-1143
Fax 715/848-9255

DISTRICT 6

Captain Douglas R. Notbohm
Lieutenant Jeffrey D. Lorentz
5005 Hwy. 53 South
(Hwy. 53 at I 94)
Eau Claire, WI 54701-8846
715/839-3800
Fax 715/839-3873 (Office)
Fax 715/839-3841(Radio)

DISTRICT 3

Captain David J. Pichette
Lieutenant Nick Scorcio
851 S. Rolling Meadows Drive
P.O. Box 984
Fond du Lac, WI 54936-0984
920/929-3700
Fax 920/929-7666

DISTRICT 5

Captain Arnold T. King
Lieutenant Gregory M. Schaub
23928 Lester McMullin Drive
P.O. Box 604
Tomah, WI 54660-0604
608/374-0513
Fax 608/374-0599

WISCONSIN STATE PATROL ACADEMY

Major Darren C. Price
Lieutenant RoxAnn L. King
95 South 10th Avenue
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DIVISION HEADQUARTERS

Superintendent David L. Collins
4802 Sheboygan Avenue, Rm. 551
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DISTRICT 1

Captain David C. Heinle
W. North Street
P.O. Box 610
DeForest, WI 53532-0610
60911 8/846-8500
Fax 608/846-8536 (Office)
Fax 608/846-8523 (Radio)

DISTRICT 2

Captain Varla J. Bishop
Lieutenant Ted J. Meagher
21115 East Moreland Blvd.
Waukesha, WI 53186-2985
262/785-4700
Fax 262/785-4723

4/21/2004

Wisconsin CDL Disqualifications

Disqualifying Offenses: Violations on or after 7/1/87 but prior to 9/30/2005	Disqualify CDL 1st CMV Conviction	Disqualify CDL 1st non-CMV Conviction	Disqualify CDL 2nd CMV Conviction	Disqualify CDL 2nd non-CMV Conviction	CDL OCC	Revoke Class D/M	Class D/M OCC (Wait)
Operating While Intoxicated (OWI)					No	6 mos-3 yr	Up to 90 days
OWI Causing Injury					No	1-2 years	60 days
OWI Causing Great Bodily Harm	1 Year				No	2 years	120 days
OWI Causing Death	or, if				No	5 years	120 days
Commercial Alcohol (CA) .04-.07	HAZ MAT				No	N/A	N/A
Commercial Alcohol Causing Injury	Conviction:	N/A	Life	N/A	No	N/A	N/A
CA Causing Great Bodily Harm	3 Years				No	N/A	N/A
CA Causing Death					No	N/A	N/A
Op. Under Influence of Controlled Substance					No	6 mos-3 yr	Up to 90 days
Refusal					No	1-3 years	30 - 120 days
Failure to Stop/Report Accident					No	0-5 years	15 days
Felony					No	1 year	15 days
Controlled Substance Felony	Life				No	N/A	N/A

Disqualifying Offenses: Violations on or after 9/30/2005	Disqualify CDL 1st CMV Conviction	Disqualify CDL 1st non-CMV Conviction	Disqualify CDL 2nd CMV Conviction	Disqualify CDL 2nd non-CMV Conviction	CDL OCC	Revoke Class D/M	Class D/M OCC (Wait)
Operating While Intoxicated (OWI)		1 Year		Life	No	6 mos-3 yr	Up to 90 days
OWI Causing Injury		1 Year		Life	No	1-2 years	60 days
OWI Causing Great Bodily Harm	1 Year	1 Year		Life	No	2 years	120 days
OWI Causing Death	or, if	1 Year		Life	No	5 years	120 days
Commercial Alcohol (CA) .04-.07	HAZ MAT	N/A		N/A	No	N/A	N/A
Commercial Alcohol Causing Injury	Conviction:	N/A		N/A	No	N/A	N/A
CA Causing Great Bodily Harm	3 Years	N/A		N/A	No	N/A	N/A
CA Causing Death		N/A	Life	N/A	No	N/A	N/A
Operating Under Influence of Controlled Subst		1 Year		Life	No	6 mos-3 yr	Up to 90 days
Refusal		1 Year		Life	No	1-3 years	30 -120 days
Failure to Stop/Report Accident		1 Year		Life	No	0-5 years	15 days
Felony		1 Year		Life	No	1 year	15 days
Driving a CMV when CDL is rev/sus/can/dqf		N/A		N/A	No	N/A	N/A
Causing a fatality/negligent operation of CMV		N/A		N/A	No	N/A	N/A
Controlled Substance Felony	Life	Life		Life	No	N/A	N/A

Serious Disqualifying Offenses: Violations on or after 7/1/87 but prior to 9/30/2005	Disqualify CDL 1st CMV Conviction	Disqualify CDL 1st non-CMV Conviction	Disqualify CDL 2nd CMV Conviction	Disqualify CDL 2nd non-CMV Conviction	CDL OCC	Rev/Sus Class D/M	Class D/M OCC (Wait)
Speeding 15 or more over the limit			2 offenses		No		
Reckless Driving			within 3 years:		No		
Passing Illegally	N/A	N/A	60 days	N/A	No	N/A	N/A
Improper or Erratic Lane Change			3 offenses		No		
Following to Closely			within 3 years:		No		
Moving violation arising from a fatal accident			120 days		No		

Serious Disqualifying Offenses: Violations on or after 9/30/2005	Disqualify CDL 1st CMV Conviction	Disqualify CDL 1st non-CMV Conviction	Disqualify CDL 2nd CMV Conviction	Disqualify CDL 2nd non-CMV Conviction	CDL OCC	Rev/Sus Class D/M	Class D/M OCC (Wait)
Speeding 15 or more over the limit		2 offenses		2 offenses	No		
Reckless Driving		within 3 years:	2 offenses	within 3 years:	No		
Passing Illegally		60 days	within 3 years:	60 days	No		
Improper or Erratic Lane Change		3 offenses	60 days	3 offenses	No		
Following to Closely	N/A	within 3 years:		within 3 years:	No	N/A	N/A
Moving violation arising from a fatal accident		120 days	3 offenses	120 days	No		
Driving a CMV without obtaining a CDL		IF the conviction	within 3 years:	IF the conviction	No		
Driving a CMV without a CDL in possession		results in rev/sus	120 days	results in rev/sus	No		
Driving a CMV without proper class/endorsement		or cancel of CDL holder's license or non-CMV driving privileges		or cancel of CDL holder's license or non-CMV driving privileges	No		

Railroad-Highway Grade Crossing: Violations on or after 10/4/2002 Driver fails to:	Disqualify CDL 1st CMV Conviction	Disqualify CDL 1st non-CMV Conviction	Disqualify CDL 2nd CMV Conviction	Disqualify CDL 2nd non-CMV Conviction	CDL OCC	Rev/Sus Class D/M	Class D/M OCC (Wait)
Slow down to ensure tracks clear					No		
Stop if the tracks are not clear			2nd offense within		No		
Stop before driving onto crossing	1st offense: 60 days	N/A	3 years: 120 days	N/A	No	N/A	N/A
Drive through crossing without stopping					No		
Obey a traffic control device or officer			3rd offense within		No		
Ensure sufficient undercarriage clearance			3 years: 1 year		No		

Falsified application for a CMV: Violations on or after 12/21/1995	Disqualify CDL 1st CMV Conviction	Disqualify CDL 1st non-CMV Conviction	Disqualify CDL 2nd CMV Conviction	Disqualify CDL 2nd non-CMV Conviction	CDL OCC	Rev/Sus Class D/M	Class D/M OCC (Wait)
Falsified application for a CMV	60 days	N/A	60 days	N/A	No	1 year	15 days

Operating CMV while Out-of-Service: Violations on or after 8/1/2000	Disqualify CDL 1st CMV Conviction	Disqualify CDL 1st non-CMV Conviction	Disqualify CDL 2nd CMV Conviction	Disqualify CDL 2nd non-CMV Conviction	CDL OCC	Rev/Sus Class D/M	Class D/M OCC (Wait)
Operating CMV while Out-of-Service	1st offense: 90 days	N/A	2nd offense within 10 years: 1 year	N/A	No	N/A	N/A
HAZ penalties apply if violation occurred while transporting HAZ MAT or while operating a vehicle designed to carry 16 or more passengers	HAZ: 180 days		HAZ: 3 years 3rd offense within 10 years: 3 years HAZ: 3 years		No		

Medical/Physical Requirements

BDS199 4/2003 Wisconsin Department of Transportation

To drive in **intrastate or interstate commerce,** you must have passed a medical examination, within the past 2 years, in accordance with Federal Motor Carrier Safety Regulations 49 CFR 391, Subpart E. A **summary of medical and physical qualifications** for drivers is found on the back of this sheet. A waiver of certain physical defects may be available. See **www.fmcsa.dot.gov/rulesregs/medreports.htm.**

For more information on medical requirements, contact USDOT Office of Motor Carriers, 567 D'Onofrio Drive, Madison, WI 53719, phone (608) 829-7530 or on the Internet go to www.fmcsa.dot.gov/factsfigs/eta/391.html.

Acceptable proof of examination is a Medical Examination Certificate completed by a Medical Examiner. A Medical Examiner is a person who is licensed, certified, and/or registered, in accordance with applicable State laws and regulations, to perform physical examinations. The term includes, but is not limited to, doctors of medicine, doctors of osteopathy, physician assistants, advanced practice nurses, registered nurses and doctors of chiropractic.

MEDICAL EXAMINER'S CERTIFICATE

I certify that I have examined _____
(Driver's name --- (Print))

in accordance with the Federal Motor Carrier Safety Regulations (49 CFR 391.41-391.49) and with knowledge of the driving duties, I find this person is qualified; and, if applicable, only when:

- ☐ wearing corrective lenses
- ☐ wearing hearing aid
- ☐ accompanied by a _____ waiver/exemption
- ☐ driving within an exempt intracity zone (49 CFR 391.62)
- ☐ accompanied by a Skill Performance Evaluation Certificate (SPE)
- ☐ qualified by operation of 49 CFR 391.64

The information I have provided regarding this physical examination is true and complete. A complete examination form with any attachment embodies my findings completely and correctly, and is on file in my office.

SIGNATURE OF MEDICAL EXAMINER	MEDICAL EXAMINER TELEPHONE	DATE OF EXAM

MEDICAL EXAMINER'S NAME (PRINT)	☐ MD ☐ DO ☐ Chiropractor ☐ Physician Assistant ☐ Advanced Practice Nurse ☐ RN

MEDICAL EXAMINER'S LICENSE OR CERTIFICATE NO. / ISSUING STATE

SIGNATURE OF DRIVER	DRIVER'S LICENSE NO.	STATE

ADDRESS OF DRIVER

EXPIRATION DATE OF THIS MEDICAL CERTIFICATE

For more information on school bus "S" and passenger "P" endorsement medical requirements, contact WIDOT Medical Review Unit, Room 351, 4802 Sheboygan Ave., Madison, WI 53705, phone (608) 266-2327.

School Bus "S" Only:

As a service, the following form is offered to aid "S" endorsement holders in complying with Wisconsin medical requirements:

FOR EMPLOYER FILES:

In Wisconsin, all drivers with school bus (S) endorsement must be free from tuberculosis in a communicable form as determined by a tuberculin test and/or chest X-Ray.

Name of Driver: _____

Tuberculin test date: _____ Results: _____

If chest X-Ray, give date and result: _____

Signature of medical examiner: _____

49 CFR 391.41 Subpart E - Physical Qualifications and Examinations:

(a) A person shall not drive a commercial motor vehicle unless he/she is physically qualified to do so and, except as provided in 391.67, **has on his/her person the original, or a photographic** copy, of a medical examiner's certificate that he/she is physically qualified to drive a commercial motor vehicle.

(b) A person is physically qualified to drive a commercial motor vehicle if that person -

(1) Has no loss of a foot, a leg, a hand, or an arm, or has been granted a waiver pursuant to 391.49;

(2) Has no impairment of:

(i) A hand or finger which interferes with prehension or power grasping; or

(ii) An arm, foot, or leg which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or any other significant limb defect or limitation which interferes with the ability to perform normal tasks associated with operating a commercial motor vehicle; or has been granted a waiver pursuant to 391.49.

(3) Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control;

(4) Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety known to be accompanied by syncope, dyspnea, collapse, or congestive cardiac failure;

(5) Has no established medical history or clinical diagnosis of a respiratory dysfunction likely to interfere with his/her ability to control and drive a commercial motor vehicle safely;

(6) Has no current clinical diagnosis of high blood pressure likely to interfere with his/her ability to operate a commercial motor vehicle safely;

(7) Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his/her ability to control and operate a commercial motor vehicle safely;

(8) Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a commercial motor vehicle;

(9) Has no mental, nervous, organic, or functional disease or psychiatric disorder likely to interfere with his/her ability to drive a commercial motor vehicle safely;

(10) Has distant visual acuity of at least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber;

(11) First perceives a forced whispered voice in the better ear at not less than 5 feet with or without the use of a hearing aid or, if tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, and 2,000 Hz with or without a hearing aid when the audio metric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951-1

(12) Does not use a Schedule 1 drug or other substance identified in Appendix D to this subchapter, an amphetamine, narcotic, or any other habit-forming drug, except that a driver may use such a substance or drug if the substance or drug is prescribed by a licensed medical practitioner who is familiar with the driver's medical history and assigned duties and who has advised the driver that the prescribed substance or drug will not adversely affect the driver's ability to safely operate a commercial motor vehicle; and

(13) Has no current clinical diagnosis of alcoholism.

4.7 School Bus Drivers

This section provides information for school bus drivers transporting children and persons with disabilities.

You must have a school bus ("S") endorsement if you drive a vehicle (painted school bus colors) transporting:

- Pupils to or from school, or points designated by the school.
- Persons with disabilities or elderly persons in connection with any transportation assistance program.

For further clarification, see page 4-12 or contact the personnel at your nearest DMV Service Center.

QUALIFICATIONS AND TESTS

To operate a school bus, drivers must have a school bus ("S") endorsement. To operate a school bus which is a commercial motor vehicle (CMV), drivers must also have a commercial driver license (CDL) with a passenger ("P") endorsement. The first part of Section 4 (in Vol. 1) outlines the information you need to qualify for a CDL with a passenger endorsement. In addition, you will need to take a special school bus knowledge test and pass a skills test in a school bus. Prepare for most CDL knowledge tests by studying the information included in Sections 2 through 4 in CDL manual Vol. 1. Prepare for the school bus knowledge test by studying Sections 4.7-4.11 included here (in Vol. 2).

Anyone taking a skills test in a bus that is a CMV without air brakes will be restricted to "No CMV operation with air brakes".

If you take the skills test in a school bus designed to carry fewer than 16 passengers (including the driver), you will be restricted to driving a school bus of this size (non-CMV).

ADDITIONAL REQUIREMENTS

There are additional driver requirements for a school bus endorsement. To qualify for the endorsement, school bus drivers must:

- Be at least 18 years old. (If you are under 21 years of age and want to drive a school bus, you will be restricted to intrastate operation - "No CMV operation in interstate commerce").
- Not have been convicted of reckless driving, operating a motor vehicle while under the influence of an intoxicant or controlled substance or other offenses indicated on pages 4-12 and 4-13 (Drivers Requirements) of this manual, within the 2 year period immediately preceding the date of application.
- Not have been convicted of a felony or offense against public morals within the past 5 years.
- Have sufficient use of both hands and the foot normally used to operate the foot brake and accelerator safely.
- Have at least 20/40 vision corrected or uncorrected in each eye, have a minimum of 70 degrees field of vision in each eye and be able to identify traffic signal colors.
- Be able to hear a forced whisper at five feet with or without a hearing aid.
- Pass a special physical examination as required by Wis. law or present the Federal Medical Card.
- To retain the endorsement, "S" endorsement holders must pass a physical every 2 years and upon renewal (every year if age 70 or older).
- At each **renewal** of the "S" endorsement, or other time frames determined by Wis. Statutes, school bus drivers must be retested (if 70 or older, they must be retested every 2 years).

4.8 School Bus Rules

In addition to knowing and obeying general traffic rules applicable to all buses and large vehicles, school bus drivers must comply with the following rules and safe driving practices.

- Keep doors closed when moving, except when crossing railroad tracks.
- Transport authorized passengers only.
- Keep aisles, stair wells, and steps clear of book bags, band instruments, etc.
- Conduct a complete inspection prior to each trip. (See "Pre-Trip Inspection," in Section 10.1.)
- Keep children out of the back row of seats except when the bus is filled. Sitting near the front of the bus provides greater protection in rear end collisions.

- Seat students with special needs near the driver.
- Keep students seated when the bus is moving unless they are going to a door before stopping or to their seat immediately after loading.
- Prohibit smoking on the bus.
- Maintain a time schedule but not at the expense of safety.
- Use approved routes and pickup or discharge points.
- Follow approved routes except in emergency.
- NEVER leave the bus unattended with the engine running and the keys in the ignition.
- Wear the safety belt.

SUPERVISING STUDENTS

A challenging task facing school bus drivers is getting children to accept part of the responsibility for their safety on the bus. Establishing a positive relationship between the driver and the passengers helps gain this cooperation.

The school bus driver should:

Instruct students on the hazards that are part of riding the bus or crossing the road.

Instruct them how to protect themselves in a crash and the proper evacuation procedures.

Remind children to continually follow safety procedures.

Inform them of expected, acceptable behavior.

Handle disciplinary problems as they occur.

Maintaining proper discipline on the school bus reduces distractions and allows the driver to give full attention to driving. Students' behavior must not distract the driver or interfere with safety or other passengers.

Local school boards develop the rules for student behavior. Copies of the rules should be distributed to students and their parents. Rule enforcement is a responsibility shared by the school bus driver, school officials and parents.

SAFETY TIPS

Student Pick-Up and Discharge

Most student injuries occur at pick-up or discharge points. When the students are off the bus, the driver has little or no control over their safety.

Select pickup and discharge points carefully. Report those sites that are dangerous to local School Boards. Other drivers should be able to see the bus in plenty of time.

Using Flashing Red Warning Lights

A school bus has no special right-of-way privileges on highways except when picking up or discharging students. When you stop, you must use the **flashing red warning lights and the stop arm**.

All vehicles must stop no closer than 20 feet to a stopped school bus with flashing red warning lights and stop arm extended. The only exception is vehicles traveling in the opposite direction on a divided highway. Do not use flashing red warning lights where both sides of the road have curb and sidewalk, unless required by local ordinance.

School bus drivers are responsible for reporting to appropriate law enforcement agencies, incidents of drivers who do not stop for a stopped school bus with flashing red warning lights activated. Note time and location, license number, color and type of vehicle, weather and road conditions.

Operators of vehicles proceeding in the opposite direction on a divided highway are not required to stop for stopped school buses displaying flashing red warning lights (s.346.48(1), Wis. Statutes.

LOADING/UNLOADING PROCEDURES

Any school bus driver approaching the front or rear of a stopped school bus that is displaying flashing red warning lights shall also display its' flashing red warning lights and stop arm while stopped. The following are stopped and loading/unloading procedures:

- Turn flashing red warning lights on at least 100 feet before the stop or sooner if conditions warrant.
- Determine if other drivers have observed flashing red warning lights and have time to stop.
- Stop in the farthest right driving lane.
- Recheck traffic.
- Activate the stop arm only after the bus has stopped and before opening the door.
- Use the stop arm only when the flashing red warning lights are used.
- Shift to neutral and apply foot brake to prevent the bus from accidentally moving.
- Recheck traffic.

- Open the door and count the students as they leave the bus.

- Students living on left side of road should wait 10-12 feet in front of the bus.

- Those living on the right should move away from the bus immediately. **However, they should not move toward the rear of the bus**.

- Recheck mirrors.

After determining when it is safe to cross, give a clear hand signal to students while keeping a lookout for traffic. Choose a predetermined signal such as sounding the horn to warn if there is danger. Choose a signal that will not be misunderstood by the other drivers.

- Recount all students who have been discharged.

- When you have accounted for all students, retract the stop arm and turn off signals.

- **Check crossover mirror and both outside rear view mirrors before starting**.

- Proceed when traffic allows.

Note: Use the same procedure guidelines for loading students, except instruct them to wait for a signal before crossing the road to the bus. Inform new students and remind all students of proper procedure at the beginning of each school year.

Do not use the flashing red warning lights when operating a school bus to transport adults or when a school bus is being used for non-school functions. When the bus is used for these situations, cover the words, "school bus" on the front and rear of the bus.

Wisconsin Exception:
If transporting children for any purpose, school bus markings may remain uncovered and flashing red lights used (s.346.48(2)(c), Wis. Statutes)

Without Flashing Red Warning Lights

If you are loading or discharging students in areas where flashing red warning lights are not required, follow these procedures:

- Activate the yellow hazard lights at least 100 feet before the stop.

- Check traffic and move over to the right curb.

- Observe traffic carefully.

- Tell students to stand away from the road when waiting to board and to move away from the bus immediately after they get off.

- Instruct students who must cross the street to go to the cross walk and wait until it is safe to proceed.

- When students are safely aboard or unloaded, turn off the hazard warning lights, check traffic and use the left turn signal to re-enter traffic. Teach students these procedures. Work with parents to promote safety.

Pick-up/Discharge On School Grounds

The pickup and discharge of students at the school grounds requires special planning to prevent injuries to children. Some rules for operating your school bus on school grounds are:

- Arrive before students are in the loading area at dismissal time.

- Drive slowly in and near the school loading area.

- Never back a bus on school grounds.

- Come to a complete stop before discharging students.

- Shift to neutral and apply foot brake.

- Supervise loading/unloading.

- After boarding students, move out carefully.

- Do not pass other buses, remain in line.

- Maintain proper following distance behind other buses.

White Strobe Lights

The flashing white strobe light increases visibility in all types of weather. Its use does not require motorists to stop. It is required equipment on buses initially registered on or after Oct. 1, 1998; optional on buses registered before that date.

See Wis. Administrative Code, Chapter Trans 300 for additional information.

Backing a School Bus

Never back a school bus unless it is absolutely necessary, and then only if it is safe. The bus' size and design severely limit the driver's ability to see. Many school bus accidents occur while backing.

If you must back, know what is behind the bus. Ask a

responsible student to move to the back seat of the bus and act as a guide. If no responsible student is available, turn the bus off, take the keys with you, get out and walk around the bus before backing.

Turning Around

Like backing, turning around in a driveway is done only when necessary. Plan routes to reduce the need for this maneuver.

If you must turn around in a driveway, there are two methods. The driver is responsible for making the choice after evaluating the conditions. When **pulling into a driveway**:

- Signal the turn.
- Check traffic and yield to oncoming vehicles.
- Pull into the drive until the bus is straight.
- Pick up students before backing.
- Check traffic carefully.
- Use hazard warning lights.

When discharging students make sure they are safe before backing onto the highway. When **backing into a driveway**:

- Drive past the driveway to allow enough space to maneuver.
- Load students before backing into the driveway.
- Check traffic carefully. Allow traffic to pass.
- Use hazard warning lights.
- Back into drive.
- Discharge students after backing.
- Check traffic and yield to oncoming vehicles.
- Proceed out of the drive.

Either method requires some backing and seriously limits your ability to see. Never back when children are near.

Railroad Crossings

All school buses, loaded or empty, must stop at railroad crossings unless the tracks are posted “exempt” or “abandoned.” The procedure for stopping at railroad crossings is:

- Check traffic before slowing.
- Turn on yellow hazard lamps at least 100 feet before the stop.
- Stop in the farthest right driving lane, no closer than 15 feet and no further than 50 feet from the nearest rail.
- Use foot brake to prevent the bus from moving.
- Ask passengers to be quiet.
- Completely open the service door (or driver’s side window on vehicles without driver controlled service door) and listen carefully.
- Look left, then right.
- Recheck again. Never rely on railroad mechanical flashing lights.
- Check mirrors for traffic behind the bus.
- Select the lowest gear that will permit crossing the tracks without shifting.

The service door shall remain open until the front wheels of the bus have cleared the first set of tracks for each required stop. The service door shall be closed before shifting.

When crossing multiple tracks, stop between tracks when there is more than 15 feet between the front and rear of the bus and any tracks.

HANDLING EMERGENCIES

School bus drivers should prepare for unexpected situations. Carry emergency cards listing telephone numbers for the sheriff, local police, school officials, ambulance service and garage.

If possible, do not leave the children unattended. Give the card to two responsible children who will go for help. Select and train several students for this responsibility. Two way radios and cellular phones are valuable in emergency situations.

Following a crash or break-down, the school bus driver must decide whether to evacuate the students. They may be safer on the bus. If evacuation is necessary, select a safe place and supervise the unloading.

It is extremely important that the bus is visible in the event of a break-down or crash. To maximize your visibility:

- Move off roadway if possible.

- Activate the hazard lights and after dark, turn on the parking lights, clearance lights and strobe light (if equipped).

- Set out traffic warning devices.

Then account for all of your students and administer necessary first aid. Report school bus crashes immediately to a local law enforcement agency.

Fire

In the event of a fire from a collision or an equipment malfunction, follow this procedure:

- Evacuate the students.

- Set out traffic warning devices.

- Send two responsible children for help with the emergency cards.

- Attempt to put the fire out with the extinguisher.

EVACUATION PROCEDURES

Each school bus driver should practice evacuation early in the school year and conduct periodic reviews of the procedure. Organize a safety patrol on each bus to assist in school bus evacuation and other emergencies.

Use the school grounds to conduct an evacuation drill using the front door only. To practice a drill using the service door and emergency exit, find an area where there is no traffic.

In an evacuation, calm the students and give them instructions. If the driver is unable to conduct the evacuation because of injury, the school patrol members should take over.

The front door evacuation procedure is:`

- Students in the left front seat exit first followed by those in the right front seat.

- Continue alternating from the front to the rear of the bus until all students are off.

The rear door evacuation procedure is:

- Assign two patrol members or older children to exit first and help the others out of the door.

- Students in the left rear seat exit first followed by those in the right rear seat.

- Continue alternating until all students are off the bus.

- If possible, use both doors for evacuation. Start at both doors alternating as above. Have the students assemble in one location immediately after the evacuation. Do not allow students to cross the road or re-enter the bus. Always account for all of the students.

4.9 Transporting Persons with Disabilities

Transporting persons with special needs or physical disabilities requires patience and understanding. Follow your company guidelines. Some general rules are:

- When raising or lowering persons on the power ramp, hold onto the wheel chair.

- Secure the wheel first and then the occupant.

- Know an individual's special health or behavioral problems.

- Practice vehicle evacuation.

Establish an understanding with the parents, guardians or other care givers on their involvement in loading and unloading the person at home. Work with the parents and school officials to determine the location for pick up and discharge. Do not leave your bus unattended to assist a person with special needs unless the engine is shut off and the keys are removed from the ignition.

Test Your Knowledge
1. What are some special rules for driving a school bus?
2. What are some general rules for backing a school bus?
3. What are the procedures for school buses at railroad crossings?
4. What are the procedures for discharging students?
5. What are the procedures for evacuating a school bus?
These questions may be on the test. If you are unable to answer them all, re-read Section 4.

4.10 Pre-Trip Inspection for School Bus

Each driver is required to make, and may be held accountable for, a pre-trip inspection of the bus to determine whether or not the vehicle is safe to operate on the highway. Review Section 10 of this manual for detailed information on pre-trip inspection. Additionally, school bus drivers must:

- Check stop arm control.
- Check operation of emergency door and buzzer.
- Check for properly equipped first aid kit.
- Activate headlights, white strobe light if bus is so equipped, hazard warning lights and red flashers, leave activated for exterior inspection.

You, as a driver, will be evaluated by driver licensing personnel on the inspection of the vehicle as part of the examination for original or renewal school bus ("S") endorsement. You may use the CDL Vehicle Inspection Memory Aid on page 10-6 as a guide when performing the pre-trip inspection.

Note: Third Party (non-DMV) testers/examiners are also authorized to administer CDL skills tests. See inside front cover for the web address or a telephone number to call for Third Party tester information.

Note: Studded snow tires are allowed on school buses between November 15th and April 1st.

s.347.45(2)(c)2, Wis. Statutes.

4.11 School Bus or Alternative Vehicle

The Transportation of Pupils in School Buses and Other Vehicles

School Bus Definition s.340.01(56), Wis. Statutes. *A "**SCHOOL BUS**" is: (See chart on page 4-14 for examples.) A motor vehicle painted school bus yellow when transporting:*

OR

- *A motor vehicle carrying 10 or more passengers in addition to the operator when transporting:*
- *Pupils (K-12) to or from public, private, vocational, technical or adult education school.*
- *Pupils (K-12) to or from curricular or extracurricular school activities (not-charter operation).*

School Bus Definition - continued

- *Pupils (K-12) to or from religious instruction on days when school is in session.*
- *Children (under 21years of age) with exceptional needs, to or from an education program approved by the Department of Public Instruction.*
- *Persons with disabilities or elderly persons in a vehicle painted school bus yellow in connection with any transportation assistance program.*

Any vehicle which meets the definition of a school bus must be painted school bus yellow in accordance with Wis. Statute 347.44 and equipped in accordance with Wis. Administrative Code, Chapter Trans. 300.

School Bus Driver Requirements:

- The driver must have an ("S") endorsement on his/her Wisconsin driver license.
- Possess a valid Wisconsin driver license of the appropriate class.
- Be at least 18 years of age.
- Have sufficient use of both hands and the foot normally used to operate the foot brake and foot accelerator correctly and efficiently.
- Meet the physical/medical standards for school bus endorsement referenced in Wis. Administrative Code, Chapter Trans 112 by providing either a current federal medical card or an MV3030B (medical examination report for ("S") or ("P") endorsement).
- Persons holding a valid license with a school bus "S" or passenger "P" endorsement shall report to the department (of transportation) any medical condition that is new or that has changed significantly since previously reported.
- No convictions (within 2 year period immediately preceding the date of application) for:
  - Operating under the influence of alcohol or a controlled substance.
  - Refusal to submit to chemical testing.
  - Reckless driving.
  - Any offenses enumerated under s.343.32, Wis. Statutes (mandatory revocation).

- Operating a commercial motor vehicle (CMV) with an alcohol concentration (AC) of .04% or more.

- Causing injury to another person by operation of a CMV with an AC of .04% or more but less than .10%.

- Two or more offenses or a combination of: operating a CMV with an AC above 0.00%; or operating a CMV within 4 hours of having consumed any intoxicating beverage; or operating a CMV while possessing an intoxicating beverage.

- No convictions within the past 5 years of a felony or offense against public morals that may relate to the safety of children.

"SCHOOL BUS" does NOT include: (See chart on page 4-14 for examples.)

- Vehicles owned or operated by a parent or guardian transporting his or her children regardless if there is any contract or paid compensation.

- "Alternative" vehicles (see below).

- A motor bus painted a color other than school bus yellow used for school-related curricular or extracurricular transportation (charter operation).

- A motor bus operated in an urban mass transit system.

- A yellow painted school bus used in a charter operation that is NOT school-related.

- A "human service vehicle" (s.340.01(23G) Wis. Statutes) painted a color other than school bus yellow transporting persons with disabilities or elderly persons under any government transportation assistance program.

Additional School Bus Information

- A school bus may not tow a trailer.

- A school bus, motor bus or motor vehicle used in transportation for extracurricular activities must be under the immediate supervision of a competent adult.

- A school bus may not be used to transport more persons than can be seated on the permanently mounted seats facing forward without interfering with the operator.

Alternative Vehicle Definition s.121.555, Wis. Statutes

A school board or governing body of a private school may provide pupil transportation services by the following alternative methods:

Use a motor vehicle not painted school bus yellow to transport 9 or less passengers in addition to the operator.

OR

For emergency transportation - temporarily use a motor vehicle, not painted school bus yellow, to transport 10 or more passengers, when the school board or governing body requests the Secretary of Transportation to determine that an emergency exists because no regular transportation is available.

Alternative Vehicle Driver Requirements

- Possess a valid Wisconsin driver license or a valid license from another jurisdiction of the appropriate class and endorsement.

- Be at least 18 years of age.

- Have sufficient use of both hands and the foot normally used to operate the foot brake and foot accelerator correctly and efficiently.

- No convictions within the last 2 years for:

  - Operating under the influence of alcohol or a controlled substance.

  - Refusal to submit to chemical testing.

  - Reckless driving.

  - Any offenses enumerated under s.343.32, Wis. Statutes (mandatory revocation).

  - Operating a commercial motor vehicle (CMV) with a blood alcohol concentration (AC) of .04% or more.

  - Causing injury to another person by operation of a CMV with an AC of .04% or more but less than .10%.

  - Two or more offenses or a combination of: operating a CMV with an AC above 0.00%; or operating a CMV within 4 hours of having consumed any intoxicating beverage; or operating a CMV while possessing an intoxicating beverage.

(Example) Color of vehicle	# of People (including driver) Vehicle design (including driver) Vehicle GVWR (Gross Vehicle Weight Rating)	Type of Passenger	Transporting where and when	Required Driver License Class and "Endorsement"
(1) Yellow	15 or less (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	K-12	To and from school or religious training during school hours, or school-related curricular or extracurricular activities.	D with ("S")
(2) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,000 lbs or less GVWR.	K-12	To and from school or religious training during school hours, or school-related curricular or extracurricular activities.	C with ("P") and ("S")
(3) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,001 lbs or more GVWR.	K-12	To and from school or religious training during school hours, or school-related curricular or extracurricular activities.	B with ("P") and ("S")
(4) Yellow	15 or less (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: A club to a Brewer's game (charter trip).	D
(5) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: A scout group to a summer camp (charter trip).	C with ("P")
(6) Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,001 lbs or more GVWR.	Anyone	Non school-related transportation. Example: A club to a Badger football game (charter trip).	B with ("P")
(7) Non-Yellow (Alternative Vehicle)	10 or less (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	K-12	To and from any school function. Examples: Students from day care center to school. Student with disabilities to school.	D
(8) Non-Yellow	11 to 15 (includes driver). Vehicle designed to carry less than 16 people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: Adult softball team to Badger State Games (charter trip).	D
(9) Non-Yellow	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,000 lbs or less GVWR.	Anyone	Non school-related transportation. Example: A church group to a picnic (charter trip).	C with ("P")
(10) Non-Yellow (charter bus)	16 or more (includes driver). Vehicle designed to carry 16 or more people 26,001 lbs or more GVWR.	K-12	Curricular or extracurricular school-related activities (charter trip).	B with ("P")

Section 9: Hazardous Materials

This section covers:

- The Intent of the Regulations
- Driver Responsibilities
- Communications Rules
- Loading & Unloading
- Bulk Tank Loading, Unloading, and Marking
- Driving and Parking Rules
- Emergencies

Hazardous materials are products that pose a risk to health, safety, and property during transportation. The term often is shortened to HAZMAT, which you may see on road signs, or to HM in government regulations. Hazardous materials include explosives, various types of gas, solids, flammable and combustible liquids, and other materials. Because of the risks involved and the potential consequences these risks impose, the handling of hazardous materials is very heavily regulated by all levels of government.

The Hazardous Materials Regulations (HMR) are found in part 73 of title 42 and parts § 171-180 of title 49 of the Code of Federal Regulations. The common reference for these regulations is 42 CFR 73 and 49 CFR § 171-180.

The Hazardous Materials Table in these regulations contains a list of hazardous materials. However, the list is not all-inclusive. Whether or not a material is considered hazardous is based on its' characteristics and the shipper's decision about whether or not the material meets the definition of a hazardous material in the regulations.

The regulations require vehicles transporting certain types or quantities of hazardous materials to display diamond-shaped, square-on-point warning signs called placards.

This section is designed to assist you in understanding your role and responsibilities in hauling hazardous materials. Due to the constantly changing nature of government regulations, it is impossible to guarantee absolute accuracy of the materials in this section. It is essential for you to have an up-to-date copy of the complete regulations. A complete glossary of terms is included in them.

You must have a commercial driver license (CDL) with a hazardous materials endorsement before driving vehicles carrying hazardous materials which require placards, or transporting any quantity of a material listed as a select agent or toxin under 42 CFR part 73. You must pass a knowledge test about the regulations and requirements to get this endorsement.

Everything you need to know to pass the knowledge test is in this section. However, this is only a beginning. Most drivers need to know much more on the job. You can learn more by reading and understanding the federal and state rules applicable to hazardous materials as well as attending hazardous materials training courses. These courses are usually offered by your employer, colleges and universities, and various associations. You can get copies of the Federal Regulations (42 and 49 CFR) through your local Government Printing Office bookstore or various industry publishers. Union or company offices often have copies of the rules for driver use too. Find out where you can get your own copy to use on the job.

The regulations require training and testing for all drivers involved in transporting hazardous materials. Your employer or a designated representative is required to provide this training and testing. Hazardous materials employers are required to keep a record of that training on each employee as long as that employee is working with hazardous materials, and for 90 days thereafter. The regulations require that hazardous materials employees be trained and tested at least once every two or three years, depending on what they are hauling.

The regulations also require that drivers have special training before operating a vehicle transporting certain flammable gas materials or highway route controlled quantities of radioactive materials. In addition, drivers transporting cargo tanks and portable tanks must receive specialized training. Each driver's employer or their designated representative must provide such training.

Some locations require permits to transport certain explosives or bulk hazardous wastes. States and counties also may require drivers to follow special hazardous materials routes. The federal government may require permits or exemptions for special hazardous materials cargo such as rocket fuel. Before driving in an area, find out about permits, exemptions, and special routes.

9.1 The Intent of the Regulations

CONTAIN THE MATERIAL

Transporting hazardous materials can be risky. The regulations are intended to protect you, those around you, and the environment. They inform shippers about how to package the materials safely, and drivers on how to load, transport, and unload the material. These are called "containment rules."

COMMUNICATE THE RISK

To communicate the risk, shippers must warn drivers and others about the material's hazards. The regulations require shippers to put hazard warning labels on packages, provide proper shipping papers, emergency

response information, and placards. These steps communicate the hazard to the shipper, the carrier, and the driver.

ASSURE SAFE DRIVERS AND EQUIPMENT

In order to get a hazardous materials endorsement on a CDL, you must pass a written test about transporting hazardous materials. To pass the test, you must know how to:

- Identify materials that are hazardous.
- Safely load shipments.
- Properly placard your vehicle in accordance with the rules.
- Safely transport shipments.

Learn the rules and follow them to reduce the risk of injury from hazardous materials. Taking shortcuts by breaking rules is unsafe. Those who break the rules can be fined and put in jail.

Inspect your vehicle before and during each trip. Law enforcement officers may stop and inspect your vehicle. They may check your shipping papers, vehicle placards, the hazardous materials endorsement on your driver license, and your knowledge of hazardous materials.

9.2 Hazardous Materials Transportation... Who Does What

THE SHIPPER

- Sends products from one place to another by truck, rail, vessel, or airplane.
- Uses the hazardous materials regulations to determine the product's:
  - Proper shipping name
  - Hazard class
  - Identification number
  - Correct packaging
  - Correct label and markings
  - Correct placards
- Must package, mark, and label the materials
- Prepare shipping papers
- Provide emergency response information
- Supply placards
- Certify on the shipping paper that the shipment has been prepared according to the rules (unless you are pulling cargo tanks supplied by you or your employer).

THE CARRIER

- Takes the shipment from the shipper to its' destination.
- Prior to transportation, checks that the shipper correctly described, marked, labeled, and otherwise prepared the shipment for transportation.
- Refuses improper shipments.
- Reports accidents and incidents involving hazardous materials to the proper government agency.

THE DRIVER

- Makes sure the shipper has identified, marked, and labeled the hazardous materials properly.
- Refuses leaking packages and shipments.
- Placards his vehicle when loading, if required.
- Safely transports the shipment without delay.
- Follows all special rules about transporting hazardous materials.
- Keeps hazardous materials shipping papers and emergency response information in the proper place.

9.3 Communication Rules

DEFINITIONS

Some words and phrases have special meanings when applied to hazardous materials. Some of these may differ from meanings you are used to. The words and phrases in this section may be on your test. The meanings of other important words are in the glossary at the end of Section 9.

A material's hazard class reflects the risks with which it is associated. There are 9 different hazard classes. Figure 9-1 lists the exact meaning of each hazard class and the types of materials included in each of the 9 classes.

Figure 9-1 - Hazardous Materials Hazard Class/Division Table

Class	Division	Name of Class or Division	Example
1	1.1 1.2 1.3 1.4 1.5 1.6	Mass Explosives Projection Hazards Mass Fire Hazards Minor Hazards Very Insensitive Extremely Insensitive	Dynamite Flares Display Fireworks Ammunition Blasting Agents Explosive Devices
2	2.1 2.2 2.3	Flammable Gases Non-Flammable Gases Poisonous/Toxic Gases	Propane Helium Fluorine, Compressed
3	- - -	Flammable Liquids	Gasoline
4	4.1 4.2 4.3	Flammable Solids Spontaneously Combustible Spontaneously Combustible When Wet	Ammonium Picrate, Wetted White Phosphorus Sodium
5	5.1 5.2	Oxidizers Organic Peroxides	Ammonium Nitrate Methyl Ethyl Ketone Peroxide
6	6.1 6.2	Poison (Toxic Material) Infectious Substances	Potassium Cyanide Anthrax Virus
7	- - -	Radioactive	Uranium
8	- - -	Corrosives	Battery Fluid
9	- - -	Miscellaneous Hazardous Materials	Polychlorinated Biphenyls (PCB)
None	- - -	ORM-D (Other Regulated Material-Domestic)	Food Flavorings, Medicines
None	- - -	Combustible Liquids	Fuel Oil

SHIPPING PAPERS

A shipping paper describes the hazardous materials being transported. Shipping orders, bills of lading, and manifests are all shipping papers. Figure 9-6 on page 9-6 shows an example of shipping papers.

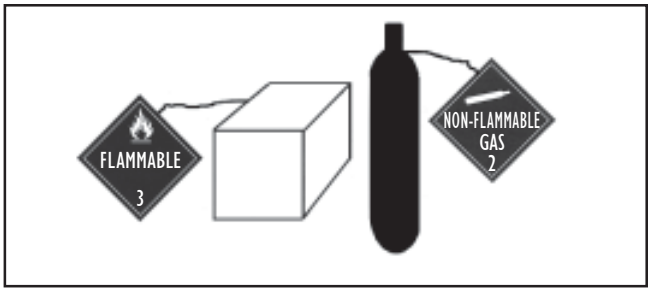
After an accident or hazardous materials spill or leak, you may be injured and unable to communicate the hazards of the materials you are transporting. Firefighters and police can prevent or reduce the amount of damage or injury at the scene if they know what hazardous materials are being carried. Your life, and the lives of others, may depend on quickly locating the hazardous materials shipping papers. For that reason the rules require:

- Shippers to describe hazardous materials correctly and include an emergency response telephone number on shipping papers.
- Carriers and drivers to put tabs on hazardous materials shipping papers, or to keep them on top of other shipping papers and keep the required emergency response information with the shipping papers.
- Drivers to keep hazardous materials shipping papers:
  - In a pouch on the driver's door, or
  - In clear view within immediate reach while the seat belt is fastened while driving, or
  - On the driver's seat when out of the vehicle.

PACKAGE LABELS

Shippers put diamond-shaped hazard warning labels on most hazardous materials packages. These labels inform others of the hazard. If the diamond label won't fit on the package, shippers may put the label on a tag securely attached to the package. For example, compressed gas cylinders that will not hold a label will have tags or decals. Labels look like the examples shown in Figure 9-2.

Figure 9-2 - Example of Labels



PLACARDS

Placards are signs put on the outside of a vehicle which identify the hazard class of the cargo. They are used to warn others of hazardous materials.

Placards are 10 3/4 inches square, square-on-point and diamond shaped.

A placarded vehicle must have at least four identical placards, readable from all four directions. For this reason, they are put on the front, rear, and both sides of the vehicle. (See Figure 9-3 on page 9-4.)

Cargo tanks, and other bulk packaging, display the I.D. number of their contents on placards, orange panels, or white square-on-point displays that are the same size as placards.

Figure 9-3 - Placard and Panel Locations

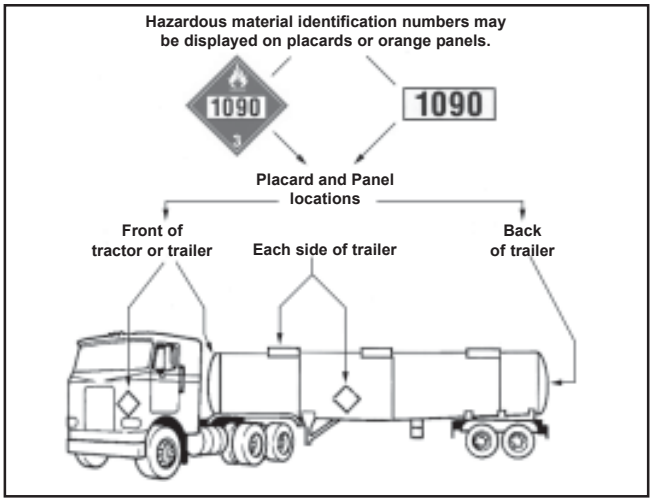


Figure 9-4 - Part of the Hazardous Materials Table

§ 172.101 Hazardous Materials Table									
Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or Division	Identification Numbers	PG	Label Codes	Special provisions (§ 172.102)	(8) Packaging (§ 173.***)		
							Exceptions	Non-bulk	Bulk
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8a)	(8b)	(8c)
_____	Poisonous, solids, self heating, n.o.s. ...	6.1	UN3124	I	Poison, spontaneously combustible	A5_____	None	211	241

LISTS OF REGULATED PRODUCTS

There are three main lists used by shippers, carriers, and drivers when trying to identify hazardous materials. Before transporting a material, look for its' name on all three lists. Some materials are on all lists, others on only one. Always check the following lists:

- (49 CFR) § 172.101 Hazardous Materials Table (see example in Figure 9-4),
- (40 CFR) § 302.4, Appendix A - Table 302.4, List of Hazardous Substances and Reportable Quantities. (See Figure 9-5), and
- (49 CFR) Appendix B to § 172.101 - List of Marine Pollutants.

The Hazardous Materials Table. Figure 9-4 shows part of the Hazardous Materials Table. Column 1 lists which shipping mode(s) the entry affects and other information concerning the shipping description. The next five columns show each material's shipping name, hazard class or division, ID number, packaging group, and required labels.

Six different symbols may appear in Column 1 of the table.

(+) Shows the proper shipping name, hazard class, and packing group to use, even if the material does not meet the hazard class definition.

(A) Means the hazardous material described in Column 2 is subject to the HMR only when offered or intended for transport by air unless it is a hazardous substance or hazardous waste.

(W) Means the hazardous material described in Column 2 is subject to the HMR only when offered or intended for transportation by water unless it is a hazardous substance, hazardous waste, or marine pollutant.

(D) Means the proper shipping name is appropriate for describing materials for domestic transportation, but may not be proper for international transportation.

(I) Identifies a proper shipping name that is used to describe materials in international transportation. A different shipping name may be used when only domestic transportation is involved.

(G) Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.

Column 2 lists the proper shipping names and descriptions of regulated materials. Entries are in alphabetical order so you can more quickly find the right entry. The table shows proper shipping names in regular type. The shipping paper must show proper shipping names. Names shown in italics are not proper shipping names.

Column 3 shows a material's hazard class or division, or the entry "Forbidden." Never transport a "Forbidden" material. Shipments are placarded based on the quantity and hazard class. You can decide which placards to use if you know these three things:

- Material's hazard class.
- Amount being shipped.
- Amount of all hazardous materials of all classes on your vehicle.

Column 4 lists the identification number for each proper shipping name. Identification numbers are preceded by the letters "UN" or "NA." The letters "NA" are associated with proper shipping names that are only used within the United States, and to and from Canada. The identification number must appear on the shipping paper as part of the shipping description. It must also appear on the package, and on cargo tanks and other bulk packaging. Police and firefighters use this number to quickly identify the hazardous materials.

Column 5 shows the packing group assigned to a material.

Column 6 shows the hazard warning label(s) shippers must put on packages of hazardous materials. Some products require use of more than one label due to the presence of a dual hazard. No label is needed where the table shows the word NONE.

Column 7 lists the additional (special) provisions that apply to this material. When there is an entry in this column, you must refer to the federal regulations for specific information.

Column 8 is a three-part column showing the section numbers covering the packaging requirements and exceptions (if any) for each hazardous material.

> **Note:** Columns 9 and 10 do not apply to transportation by highway.

Appendix A to §172.101 - The List of Hazardous Substances and Reportable Quantities. The DOT and the EPA want to know about spills of hazardous substances. They are named in the List of Hazardous Substances and Reportable Quantities (see Figure 9-5). Column 3 of the List shows each product's reportable quantity (RQ). When these materials are being transported in a reportable quantity or greater in one package, the shipper displays the letters RQ on the shipping paper and package. The letters RQ may appear before or after the basic description. You or your employer must report any spill of these materials which occurs in a **reportable quantity**.

If the words INHALATION HAZARD appear on the shipping paper or package, the rules require display of the POISON or POISON GAS placards, as appropriate. These placards must be used in addition to other placards which may be required by the product's hazard class. Always display the hazard class placard and the POISON placard, even for small amounts.

Figure 9-5 - List of Hazardous Substances

Spills of 10 pounds or more must be reported.

LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES - Continued

Hazardous Substance	Reportable Quantity (RQ) Pounds (Kilograms)
Phenylmercuric acetate	100 (45.4)
Phenylthiourea	100 (45.4)
Phorate	10 (4.54)
Phosgene	10 (4.54)
Phosphine	100 (45.4)
Phosphoric acid	5000 (2270)
Phosphroic acid, diethyl 4-nitrophenyl ester	100 (45.4)
Phosphoric acid, lead (2+) salt (2:3)	10 (4.54)

Test Your Knowledge

1. Shippers package in order to (fill in the blank) the material.
2. Drivers placard their vehicle to (fill in the blank) the risk.
3. What three things do you need to know to decide which placards, if any, are needed?
4. A hazardous materials ID number must appear on the (fill in the blank) and on the (fill in the blank). The identification number must also appear on cargo tanks and other bulk packagings.
5. Where must you keep shipping papers describing hazardous materials?

These questions may be on your test. If you are unable to answer them all, re-read pages 9-1 through 9-5.

THE SHIPPING PAPER

The shipping paper shown in Figure 9-6 describes a shipment. A shipping paper for hazardous materials must include:

- Page numbers if the shipping paper has more than one page. The first page must list the total number of pages. For example, "Page 1 of 4."
- A proper shipping description for each hazardous material.
- A "**shipper's certification**," signed by the shipper, indicating they prepared the shipment according to the rules.

THE ITEM DESCRIPTION

If a shipping paper describes both hazardous and non-hazardous products, the hazardous materials will be either:

- Described first, or
- Highlighted in a contrasting color, or

- Identified by an “X” placed before the shipping name in a column captioned “HM.” The letters “RQ” may be used instead of “X” if a reportable quantity is present in one package.

The basic description of hazardous materials includes the proper shipping name, hazard class or division, the identification number, and the packing group, if any, in that order. The packing group is displayed in Roman numerals and may be preceded by “PG.”

Shipping name, hazard class, and ID number must not be abbreviated unless specifically authorized in the hazardous materials regulations. The description must also show:

- The total quantity and unit of measure, and
- The letters RQ, if a reportable quantity.
- If the letters RQ appear, the name of the hazardous substance.
- For “n.o.s.” and generic descriptions, the technical name of the hazardous material.

Shipping papers must also list an emergency response telephone number. The emergency response telephone number is the responsibility of the shipper. It can be used by emergency responders to obtain information about any hazardous materials involved in a spill or fire.

Shippers must also provide emergency response information to the motor carrier for each hazardous material being shipped. The emergency response information must be able to be used away from the motor vehicle and must provide information on how to safely handle incidents involving the material. It must include information on the shipping name of the hazardous material, risks to health, fire, explosion, and initial methods of handling spills, fires, and leaks of the material.

Such information can be on the shipping paper or some other document that includes the basic description and technical name of the hazardous material. Or, it may be in a guidance book such as the Emergency Response Guidebook (ERG). Motor carriers may assist shippers by keeping an ERG on each vehicle carrying hazardous materials. The driver must provide the emergency response information to any federal, state, or local authority responding to or investigating a hazardous materials incident.

Total quantity must appear before or after the basic description. The packaging type and the unit of measurement may be abbreviated. For example:

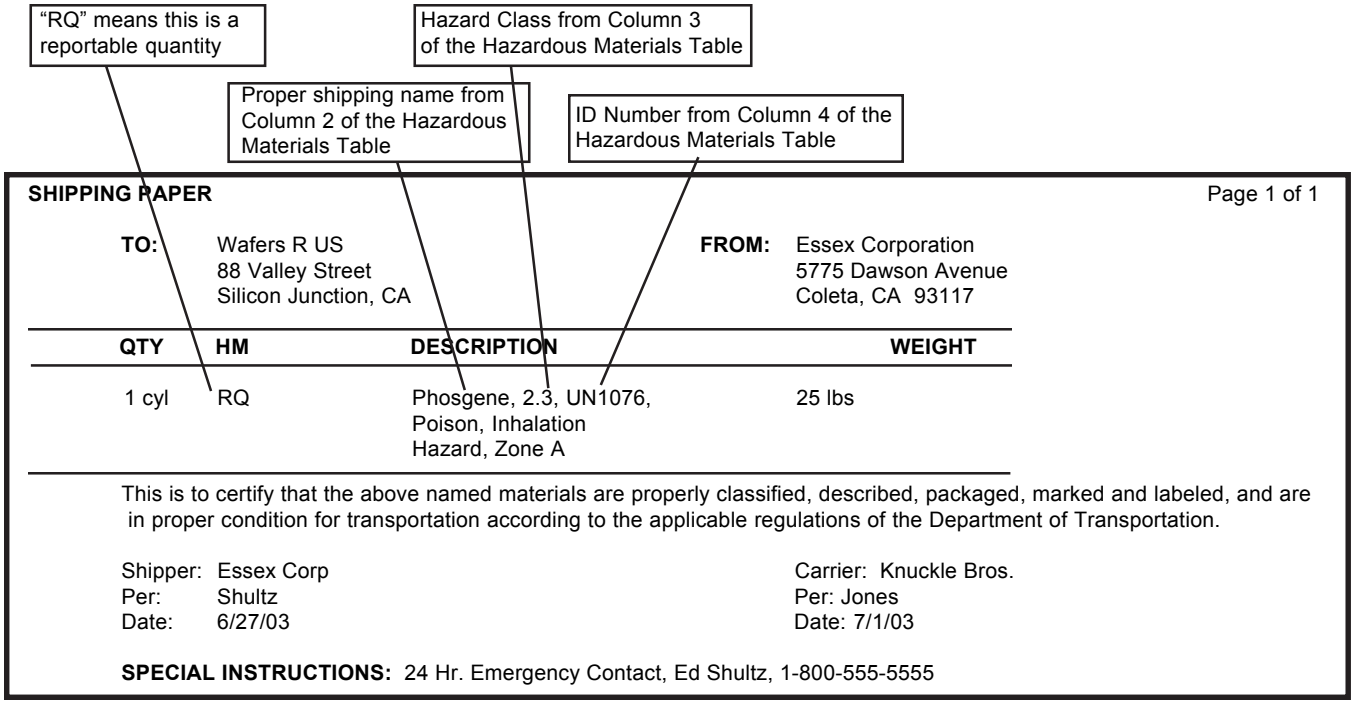
10 ctns. Paint, 3, UN1263, PG II, 500 lbs.

The shipper of hazardous wastes must put the word WASTE before the proper shipping name of the material on the shipping paper (hazardous waste manifest). For example:

Waste Acetone, 3, UN1090, PG 11.

A non-hazardous material may not be described by using a hazard class or an ID number.

Figure 9-6 - Example of Shipping Paper



SHIPPER'S CERTIFICATION

When the shipper packages hazardous materials, he/she certifies that the package has been prepared according to the rules. The signed shipper's certification appears on the original shipping paper. The only exceptions are when a shipper is a private carrier transporting their own product and when the package is provided by the carrier (for example, a cargo tank). Unless a package is clearly unsafe or does not comply with the HMR, you may accept the shipper's certification concerning proper packaging. Some carriers have additional rules about transporting hazardous materials. Follow your employer's rules when accepting shipments

PACKAGE MARKINGS AND LABELS

Shippers print required markings directly on the package, an attached label, or tag. An important package marking is the name of the hazardous material. It is the same name as the one on the shipping paper. When required, the shipper will put the following on the package:

- The name and address of shipper or consignee.
- The hazardous material's shipping name and ID number.
- The labels required.

If the rules require it, the shipper also will put RQ or INHALATION-HAZARD on the package. Packages with liquid containers inside will also have package orientation markings with the arrows pointing in the correct upright direction. The labels used always reflect the hazard class of the product. If a package needs more than one label, the labels will be close together, near the proper shipping name.

RECOGNIZING HAZARDOUS MATERIALS

Learn to recognize shipments of hazardous materials. To find out if the shipment includes hazardous materials, look at the shipping paper. Does it have:

- An entry with a proper shipping name, hazard class, and ID number?
- A highlighted entry, or one with an X or RQ in the hazardous materials column?

Other clues suggesting hazardous materials:

- What type of business is shipping the material? Paint dealer? Chemical supply? Scientific supply house? Pest control or agricultural supplier? Explosives, munitions, or fireworks dealer?
- Are there tanks with diamond labels or placards on the premises?
- What type of package is being shipped? Cylinders and drums are often used for hazardous materials shipments.
- Is a hazard class label, proper shipping name, or ID number on the package?
- Are there any handling precautions?

HAZARDOUS WASTE MANIFEST

When transporting hazardous wastes, you must sign by hand and carry a Uniform Hazardous Waste Manifest. The name and EPA registration number of the shippers, carriers, and destination must appear on the manifest. Shippers must prepare, date, and sign the manifest by hand. Treat the manifest as a shipping paper when transporting the waste. Only give the waste shipment to another registered carrier or disposal/treatment facility. Each carrier transporting the shipment must sign the manifest by hand. After you deliver the shipment, keep your copy of the manifest. Each copy must have all needed signatures and dates, including those of the person to whom you delivered the waste.

PLACARDING

Attach the appropriate placards to the vehicle before you drive it. You are only allowed to move an improperly placarded vehicle during an emergency, in order to protect life or property.

Placards must appear on both sides and both ends of the vehicle. Each placard must be:

- Easily seen from the direction it faces.
- Placed so the words or numbers are level and read from left to right.
- At least 3 inches away from any other markings.
- Kept clear of attachments or devices such as ladders, doors, and tarpaulins.
- Kept clean and undamaged so the color, format, and message are easily seen.

To decide which placards to use, you need to know:

- The hazard class of the materials.
- The amount of hazardous materials shipped.
- The total weight of all classes of hazardous materials in your vehicle.

Always make sure the shipper shows the correct basic description on the shipping paper and verifies that the proper labels are shown on the packages. If you are not familiar with the material, ask the shipper to contact your office.

PLACARD TABLES

There are two placard tables, Table 1 and Table 2. Table 1 materials must be placarded whenever **any** amount is transported.

Placard Table 1 - Any Amount

If your vehicle contains any amount of...	Placard as...
1.1	EXPLOSIVE 1.1
1.2	EXPLOSIVE 1.2
1.3	EXPLOSIVE 1.3
2.3	POISON GAS
4.3	DANGEROUS WHEN WET
6.1 (PG I, inhalation hazard only)	POISON
7 (Radioactive Yellow III label only)	RADIOACTIVE

Except for bulk packagings, the hazard classes in Table 2 need placards only if the total amount transported is 1,001 lbs. or more including the package. Add the amounts from all shipping papers for all the Table 2 products you have on board. You may use DANGEROUS placards instead of separate placards for each Table 2 hazard class when:

- You have 1,001 lbs. or more of two or more Table 2 hazard classes, requiring different placards, and
- You have not loaded 2,205 lbs. or more of any Table 2 hazard class material at any one place. (You must use the specific placard for this material.)

If the words INHALATION HAZARD are on the shipping paper or package, you must display POISON placards in addition to any other placards needed by the product's hazard class.

You need not use EXPLOSIVES 1.5, OXIDIZER, and DANGEROUS placards if a vehicle contains Division 1.1 or 1.2 explosives and is placarded with EXPLOSIVES 1.1 or 1.2 placards. You need not use a Division 2.2 NON-FLAMMABLE GAS placard on a vehicle displaying a Division 2.1 FLAMMABLE GAS or, for oxygen, a Division 2.2 OXYGEN placard.

Placards used to identify the primary hazard class of a material must have the hazard class or division number displayed in the lower corner of the placard. No hazard class or division number is allowed on placards used to identify a secondary hazard class of a material.

Placards may be displayed for hazardous materials even if not required, as long as the placard identifies the hazard of the material being transported.

Placard Table 2 - 1,001 lbs. or More

Category of Material (Hazard class or division number and additional description, as appropriate)	Placard Name
1.4	EXPLOSIVES 1.4
1.5	EXPLOSIVES 1.5
1.6	EXPLOSIVES 1.6
2.1	FLAMMABLE GAS
2.2	NON-FLAMMABLE GAS
3	FLAMMABLE
Combustible liquid	COMBUSTIBLE*
4.1	FLAMMABLE SOLID
4.2	SPONTANEOUSLY COMBUSTIBLE
5.1	OXIDIZER
5.2	ORGANIC PEROXIDE
6.1 (PG I or II, other than PG I inhalation hazard)	POISON
6.1 (PG III)	KEEP AWAY FROM FOOD
6.2	(NONE)
8	CORROSIVE
9	CLASS 9**
ORM-D	(NONE)

* FLAMMABLE placard may be used in place of a COMBUSTIBLE placard on a cargo tank or portable tank.

** Class 9 Placard is not required for domestic transportation.

Test Your Knowledge

1. What is a shipper's certification? Where does it appear? Who signs it?
2. When may non-hazardous materials be described by hazard class words or ID numbers?
3. Name five hazard classes that require placarding in **any** amount.
4. A shipment described on the Hazardous Waste Manifest may only be delivered to another (fill in the blank) carrier or treatment facility, which then signs the (fill in the blank) giving you a copy which you must keep.
5. Your load includes 20 lbs. of Division 2.3 gas and 1,001 lbs. of flammable gas. What placards do you need, if any?

These questions may be on your test. If you are unable to answer them all, re-read pages 9-1 through 9-8.

9.4 Loading and Unloading

GENERAL LOADING REQUIREMENTS

- Do all you can to protect containers of hazardous materials. Don't use any tools which might damage containers or other packaging during loading. Don't use hooks.
- Before loading or unloading, set the parking brake. Make sure the vehicle will not move.
- Many products become more hazardous when exposed to heat. Load hazardous materials away from heat sources.
- Watch for signs of leaking or damaged containers: LEAKS SPELL TROUBLE! Do not transport leaking packages. Depending on the material, you, your truck, and others could be in danger.

Containers of Class 1 (explosives), Class 3 (flammable liquids), Class 4 (flammable solids), Class 5 (oxidizers), Class 8 (corrosives), Class 2 (gases), and Division 6.1 (poisons) must be braced to prevent movement of the packages during transportation.

No Smoking. When loading or unloading hazardous materials, keep fire away. Don't let people smoke nearby. Never smoke around:

- Class 1 Explosives
- Class 3 Flammable Liquids
- Class 4 Flammable Solids
- Class 5 Oxidizers
- Division 2.1 Flammable Gas

Secure Against Movement. Brace containers so they will not fall, slide, or bounce around during transportation. Be very careful when loading containers that have valves or other fittings.

After loading, do not open any package during your trip. Never transfer hazardous materials from one package to another while in transit. You may empty a cargo tank, but do not empty any other package while it is on the vehicle.

Cargo Heater Rules. There are special cargo heater rules for loading:

- Class 1 Explosives
- Class 3 Flammable Liquids
- Division 2.1 Flammable Gas

The rules usually forbid use of cargo heaters, including automatic cargo heater/air conditioner units. Unless you have read all the related rules, don't load the above products in a cargo space that has a heater.

Use Closed Cargo Space. You cannot have overhang or tailgate loads of:

- Class 1 Explosives
- Class 4 Flammable Solids
- Class 5 Oxidizers

You must load these hazardous materials into a closed cargo space unless all packages are:

- Fire and water resistant, or
- Covered with a fire and water resistant tarp.

PRECAUTIONS FOR SPECIFIC HAZARDS

Explosives. Turn your engine off before loading or unloading any explosives. Then check the cargo space. You must:

- Disable cargo heaters. Disconnect heater power sources and drain heater fuel tanks.
- Make sure there are no sharp points that might damage cargo. Look for bolts, screws, nails, broken side panels, and broken floor boards.
- Use a floor lining with Division 1.1, 1.2, or 1.3 (Class A or B explosives). The floors must be tight and the liner must be either non-metallic material or non-ferrous metal.

Use extra care to protect explosives. Never use hooks or other metal tools. Never drop, throw, or roll packages. Protect explosive packages from other cargo that might cause damage.

Do not transfer a Division 1.1, 1.2, or 1.3 (Class A or B explosive) from one vehicle to another on a public roadway except in an emergency. If safety requires an emergency transfer, set out red warning reflectors, flags, or electric lanterns. You must warn others on the road. Never transport damaged packages of explosives. Do not take a package that shows any dampness or oily stain.

Do not transport Division 1.1 or 1.2 (Class A explosives) in triples or in vehicle combinations if:

- There is a marked or placarded cargo tank in the combination, or
- The other vehicle in the combination contains:
  - Division 1.1 A (initiating explosives)
  - Packages of Class 7 (radioactive) materials labeled "Yellow III,"
  - Division 2.3 (poisonous gas) or Division 6.1 (poisonous) materials
  - Hazardous materials in a portable tank, on a DOT Spec 106A or 110A tank

Class 8 (Corrosive) Materials. If loading by hand, load breakable containers of corrosive liquid one by one. Keep them right side up. Do not drop or roll the

containers. Load them onto an even floor surface. Stack carboys only if the lower tiers can bear the weight of the upper tiers safely.

Do not load nitric acid above any other product, or stack more than two high.

Load charged storage batteries so their liquid won't spill. Keep them right side up. Make sure other cargo won't fall against or short circuit them.

Never load corrosive liquids next to or above:

- Division 1.4 (Explosives C)
- Class 4 (Flammable Solids)
- Class 5 (Oxidizers)
- Division 2.3, Zone B (Poisonous Gases)

Never load corrosive liquids with:

- Division 1.1 or 1.2 (Explosives A)
- Division 1.2 or 1.3 (Explosives B)
- Division 1.5 (Blasting Agents)
- Division 2.3, Zone A (Poisonous Gases)
- Division 4.2 (Spontaneously Combustible Materials)
- Division 6.1, PGI, Zone A (Poison Liquids)

Class 2 (Compressed Gases) Including Cryogenic Liquids. If your vehicle doesn't have racks to hold cylinders, the cargo space floor must be flat. The cylinders must be:

- Held upright or braced laying down flat, or
- In racks attached to the vehicle, or
- In boxes that will keep them from turning over.

Division 2.3 (poisonous gas) or Division 6.1 (poisonous) materials. Never transport these materials in containers with interconnections. Never load a package labeled POISON or POISON GAS in the driver's cab or sleeper or with food material for human or animal consumption.

Class 7 (Radioactive) Materials. Some packages of Class 7 (radioactive) materials bear a number called the "transport index." The shipper labels these packages Radioactive II or Radioactive III, and prints the package's transport index on the label. Radiation surrounds each package, passing through all nearby packages. To deal with this problem, the number of packages you can load together is controlled. Their closeness to people, animals, and unexposed film is also controlled. The transport index tells the degree of control needed during transportation. The total transport index of all packages in a single vehicle must not exceed 50.

Appendix A to this section shows rules for each transport index. It shows how close you can load Class 7 (radioactive) materials to people, animals, or film. For example, you can't leave a package with a transport index of 1.1 within 2 feet of people or cargo space walls.

Mixed Loads. The rules require some products to be loaded separately. You cannot load them together in the same cargo space. Figure 9-7 on page 11 lists some examples. The regulations (the Segregation and Separation Chart) name other materials you must keep apart.

Figure 9-7 Prohibited Loading Combinations

DO NOT LOAD...	IN THE SAME VEHICLE WITH...
Division 6.1 or 2.3 (POISON or poison gas labeled material)	animal or human food unless the poison package is over packed in an approved way. Foodstuffs are anything you swallow. However, mouth-wash, toothpaste, and skin creams are not foodstuff.
Division 2.3 (poisonous) gas Zone A or Division 6.1 (poison) liquids, PGI, Zone A	Division 5.1 (oxidizers), Class 3 (flammable liquids), Class 8 (corrosive liquids), Division 5.2 (organic peroxides), Division 1.1, 1.2, 1.3 (Class A or B) explosives, Division 1.5 (blasting agents), Division 2.1 (flammable gases), Class 4 (flammable solids).
Charged storage batteries	Division 1.1 (Class A Explosives).
Class 1 (Detonating primers)	any other explosives unless in authorized containers or packagings.
Division 6.1 (Cyanides or cyanide mixtures)	acids, corrosive materials, or other acidic materials which could release hydrocyanic acid from cyanides. For example: Cyanides, Inorganic, n.o.s. Silver Cyanide Sodium Cyanide
Nitric acid (Class 8)	other materials unless the nitric acid is not loaded above any other material.

Test Your Knowledge
1. Around which hazard classes must you never smoke? 2. Which three hazard classes should not be loaded into a trailer that has a heater/air conditioner unit? 3. Should the floor liner required for Division 1.1 or 1.2 (Explosives A) be stainless steel? 4. At the shipper's dock you're given a paper for 100 cartons of battery acid. You already have 100 lbs. of dry Silver Cyanide on board. What precautions do you need to take? 5. Name a hazard class that uses transport indexes to determine the amount that can be loaded in a single vehicle.
These questions may be on your test. If you are unable to answer them all, re-read Section 9.4.

9.5 Bulk Packaging Marking, Loading & Unloading

The glossary at the end of this section gives the meaning of the word bulk. **Cargo tanks** are bulk packagings permanently attached to a vehicle. Cargo tanks remain on the vehicle when you load and unload them. **Portable tanks** are bulk containers which are not permanently attached to a vehicle. The product is loaded or unloaded while the portable tanks are off the vehicle. Portable tanks are then put on a vehicle for transportation. There are many types of cargo tanks in use. The most common cargo tanks are MC306 for liquids and MC331 for gases.

MARKINGS

You must display the ID number of the hazardous materials in portable tanks and cargo tanks and other bulk packagings (such as dump trucks). ID numbers are in column 4 of the Hazardous Materials Table. The rules require black 100 mm (3.9 inch) numbers on orange panels, placards, or a white, diamond-shaped background if no placards are required. Specification cargo tanks must show re-test date markings.

Portable tanks must also show the lessee or owner's name. They must also display the shipping name of the contents on two opposing sides. The letters of the shipping name must be at least 2 inches tall on portable tanks with capacities of more than 1,000 gallons and 1 inch tall on portable tanks with capacities of less than 1,000 gallons. The ID number must appear on each side **and** each end of a portable tank or other bulk packaging that hold 1,000 gallons or more and on two opposing sides, if the portable tank holds less than 1,000 gallons. The ID numbers must still be visible when the portable tank is on the motor vehicle. If they are not visible, you must display the ID number on both sides and ends of the motor vehicle.

TANK LOADING

The person in charge of loading and unloading a cargo tank must be sure a qualified person is always watching. This person watching the loading or unloading must:

- Be alert.
- Have a clear view of the cargo tank.
- Be within 25 feet of the tank.
- Know of the hazards of the materials involved.
- Know the procedures to follow in an emergency, and
- Be authorized to move the cargo tank and able to do so.

Close all manholes and valves before moving a tank of hazardous materials, no matter how small the amount in the tank or how short the distance. Manholes and valves must be closed to prevent leaks.

FLAMMABLE LIQUIDS

Turn off your engine before loading or unloading any flammable liquids. Only run the engine if needed to operate a pump. Ground a cargo tank correctly before filling it through an open filling hole. Ground the tank before opening the filling hole, and maintain the ground until after closing the filling hole.

COMPRESSED GAS

Keep liquid discharge valves on a compressed gas tank closed except when loading and unloading. Unless your engine runs a pump for product transfer, turn it off when loading or unloading. If you use the engine, turn it off after product transfer, before you unhook the hose. Unhook all loading/unloading connections before coupling, uncoupling, or moving a chlorine cargo tank. Always chock trailers and semi-trailers to prevent motion when uncoupled from the power unit.

Test Your Knowledge
1. What are cargo tanks? 2. How is a portable tank different from a cargo tank? 3. Your engine runs a pump used during delivery of compressed gas. Should you turn off the engine **before** or **after** unhooking hoses after delivery?
These questions may be on your test. If you are unable to answer them all, re-read Section 9.5.

9.6 Hazardous Materials... Driving & Parking Rules

PARKING WITH DIVISION 1.1, 1.2, OR 1.3 (CLASS A OR B) EXPLOSIVES

Never park with Division 1.1, 1.2, or 1.3 (Class A or B) explosives within 5 feet of the traveled part of the road. Except for short periods of time needed for vehicle operation necessities (e.g., fueling), do not park within 300 feet of:

- A bridge, tunnel, or building.
- A place where people gather, or
- An open fire.

If you must park to do your job, do so but only briefly.

Don't park on private property unless the owner is aware of the danger. Someone must always watch the parked vehicle. You may let someone else watch it for you only if your vehicle is:

- On the shipper's property, or
- On the carrier's property, or
- On the consignee's property.

You are allowed to leave your vehicle unattended in a safe haven. A safe haven is an approved place for parking unattended vehicles loaded with explosives. Designation of authorized safe havens are usually made by local authorities.

PARKING A PLACARDED VEHICLE NOT TRANSPORTING DIVISION 1.1, 1.2, OR 1.3 (CLASS A OR B) EXPLOSIVES

You may park a placarded vehicle (not laden with explosives) within 5 feet of the traveled part of the road only if your work requires it. Do so only briefly. Someone must always watch the vehicle when parked on a public roadway or shoulder. Do not uncouple a trailer with hazardous materials and leave it on a public street. Do not park within 300 feet of an open fire.

ATTENDING PARKED VEHICLES

The person attending a placarded vehicle must:

- Be in the vehicle, awake, and not in the sleeper berth, or within 100 feet of the vehicle and have it within clear view.
- Be aware of the hazards of the materials being transported.
- Know what to do in emergencies, and
- Be able to move the vehicle, if needed.

NO FLARES!

If your vehicle breaks down and you need to use stopped vehicle signals, use only reflective triangles or red electric lights. Never use burning signals, such as flares or fusees, around a:

- Tank used for Class 3 (flammable liquids) or Division 2.1 (flammable gas) whether loaded or empty.
- Vehcle loaded with Division 1.1, 1.2, or 1.3 (Class A or B) explosives.

ROUTE RESTRICTIONS

Some states and counties require permits to transport hazardous materials or wastes. They may limit the routes you can use. Local rules about routes and permits change often. It is your job as driver to find out if you need permits or must use special routes. Make sure you have all needed papers before starting out.

If you work for a carrier, ask your dispatcher about route restrictions or permits. If you are an independent trucker and are planning a new route, check with state agencies where you plan to travel. Some localities prohibit transportation of hazardous materials through tunnels, over bridges, or other roadways. Check before you start.

Whenever placarded, avoid heavily populated areas, crowds, tunnels, narrow streets, and alleys. Take other routes, even if inconvenient, unless there is no other way. Never drive a placarded vehicle near open fires unless you can safely pass the fire without stopping.

If transporting Division 1.1, 1.2, or 1.3 (Class A or B) explosives, you must have a written route plan and follow that plan. Carriers prepare the route plan in advance and give the driver a copy. You may plan the route yourself if you pick up the explosives at a location other than your employer's terminal. Write out the plan in advance. Keep a copy of it with you while transporting the explosives. Deliver shipments of explosives only to authorized persons or leave them in locked rooms designed for explosives storage.

A carrier must choose the safest route to transport placarded radioactive materials. After choosing the route, the carrier must tell the driver about the radioactive materials, and show the route plan.

NO SMOKING

Do not smoke within 25 feet of a placarded cargo tank used for Class 3 (flammable liquids) or Division 2.1 (gases). Also, do not smoke or carry a lighted cigarette, cigar, or pipe within 25 feet of any vehicle which contains:

- Class 1 Explosives
- Class 3 Flammable Liquids
- Class 4 Flammable Solids
- Class 5 Oxidizers

REFUEL WITH ENGINE OFF

Turn off your engine before fueling a motor vehicle containing hazardous materials. Someone must always be at the nozzle, controlling fuel flow.

10 B:C FIRE EXTINGUISHER

The power unit of placarded vehicles must have a fire extinguisher with a UL rating of 10 B:C or more.

CHECK TIRES

Make sure your tires are properly inflated. Check placarded vehicles with dual tires at the beginning of every trip and each time the vehicle is parked. The only acceptable way to check tire pressure is to use a tire pressure gauge.

Do not drive with a tire that is leaking or is flat, except to go to the nearest safe place to fix it. Remove any overheated tire. Place it a safe distance from your vehicle. Don't drive until you correct the cause of the overheating. Remember to follow the rules about parking and attending placarded vehicles. They apply even when checking, repairing, or replacing tires.

WHERE TO KEEP SHIPPING PAPERS AND EMERGENCY RESPONSE INFORMATION

Do not accept a hazardous materials shipment without a properly prepared shipping paper. A shipping paper for hazardous materials must always be easily recognized. Other people must be able to find it quickly if the vehicle is involved in an accident.

- Clearly distinguish hazardous materials shipping papers from others by tabbing them or keeping them on top of the stack of papers.
- When you are behind the wheel, keep shipping papers within your reach (with your seat belt on), or in a pouch on the driver's door. They must be easily seen by someone entering the cab.
- When not behind the wheel, leave shipping papers in the driver's door pouch or on the driver's seat.
- Emergency response information must be kept in the same location as the shipping paper.

PAPERS FOR DIVISION 1.1, 1.2 OR, 1.3 (CLASS A OR B) EXPLOSIVES

A carrier must give each driver transporting Division 1.1, 1.2, or 1.3 (Class A or B) explosives a copy of Federal Motor Carrier Safety Regulations (FMCSR), Part 397. The carrier must also give written instructions on what to do if delayed or in an accident. The written instructions must include:

- The names and telephone numbers of people to contact (including carrier agents or shippers).
- The nature of the explosives transported.
- The precautions to take in emergencies such as fires, accidents, or leaks.

Drivers must sign a receipt for these documents.

You must be familiar with, and have in your possession while driving, the:

- Shipping papers.
- Written emergency instructions.
- Written route plan.
- A copy of FMCSR, Part 397.

EQUIPMENT FOR CHLORINE

A driver transporting chlorine in cargo tanks must have an approved gas mask in the vehicle. The driver must also have an emergency kit for controlling leaks in dome cover plate fittings on the cargo tank.

STOP BEFORE RAILROAD CROSSINGS

Stop before a railroad crossing if your vehicle:

- Is placarded, or
- Carries any amount of chlorine, or
- Has cargo tanks, whether loaded or empty, used for hazardous materials.

You must stop 15 to 50 feet before the nearest rail. Proceed only when you are sure no train is coming. Don't shift gears while crossing the tracks.

9.7 Hazardous Materials... Emergencies

No Smoking
Warn Others
Keep People Away
Avoid Contact or Inhaling

EMERGENCY RESPONSE GUIDEBOOK (ERG)

The U.S. Department of Transportation has a guidebook for firefighters, police, and industry workers on how to protect themselves and the public from hazardous materials. The guide is indexed by proper shipping name and hazardous materials identification number. Emergency personnel look for these things on the shipping paper. That is why it is vital that the proper shipping name, ID number, label, and placards are correct.

ACCIDENTS/INCIDENTS

As a professional driver, your job at the scene of an accident is to:

- Keep people away from the scene.
- Limit the spread of material, **only if you can safely do so**.
- Communicate the danger of the hazardous materials to emergency response personnel.
- Provide shipping papers and emergency response information to emergency responders.

Follow this checklist:

- Check to see that your driving partner is OK.
- Keep shipping papers with you.
- Keep people far away and upwind.
- Warn others of the danger.
- Send for help.
- Follow your employer's instructions.

FIRES

You may need to control minor truck fires on the road. **However, unless you have the training and equipment to do so safely, don't fight hazardous materials fires**. Dealing with hazardous materials fires requires special training and protective gear.

When you discover a fire, send for help. You may use the fire extinguisher to keep minor truck fires from spreading to cargo before firefighters arrive. Feel trailer doors to see if they are hot before opening them. If hot, you may have a cargo fire and should not open the doors. Opening doors lets air in and may make the fire flare up. Without air, many fires only smolder until firemen arrive, doing less damage. If your cargo is already on fire, it is not safe to fight the fire. Keep the shipping papers with you to give to emergency personnel as soon as they arrive. **Warn other people of the danger and keep them away**.

If you discover a cargo leak, identify the hazardous materials leaking by using shipping papers, labels, or package location. **Do not touch any leaking material—many people injure themselves by touching hazardous materials**. Do not try to identify the material or find the source of a leak by smell. Toxic gases can destroy your sense of smell and can injure or kill you even if they don't smell. Never eat, drink, or smoke around a leak or spill.

If hazardous materials are spilling from your vehicle, do not move it any more than safety requires. You may move off the road and away from places where people gather, if doing so serves safety. Only move your vehicle if you can do so without danger to yourself or others.

Never continue driving with hazardous materials leaking from your vehicle in order to find a phone booth, truck stop, help, or other similar reason. Remember, the carrier pays for the cleanup of contaminated parking lots, roadways, and drainage ditches. The costs are enormous, so don't leave a lengthy trail of contamination. If hazardous materials are spilling from your vehicle:

- Park it.
- Secure the area.
- Stay there.
- Phone or send someone else for help.

When sending someone for help, give that person:

- A description of the emergency.
- Your exact location and direction of travel.
- Your name, the carrier's name, and the name of the community or city where your terminal is located.
- The proper shipping name, hazard class, and ID number of the hazardous materials, if you know them.

This is a lot for someone to remember. It is a good idea to write it all down for the person you send for help. The emergency response team must know these things to find you and to handle the emergency. They may have to travel miles to get to you. This information will help them to bring the right equipment the first time, without needing to go back for it.

Never move your vehicle, if doing so will cause contamination or damage the vehicle. Keep downwind and away from roadside rests, truck stops, cafes, and businesses. Never try to repack leaking containers. Unless you have the training and equipment to repair leaks safely, don't try it. Call your dispatcher or supervisor for instructions and, if needed, emergency personnel.

RESPONSES TO SPECIFIC HAZARDS

Class 1 (Explosives). If your vehicle has a breakdown or accident while carrying explosives, warn others of the danger. Keep bystanders away. Do not allow smoking or open fire near the vehicle. If there is a fire, warn everyone of the danger of explosion.

Remove all explosives before separating vehicles involved in a collision. Place the explosives at least 200 feet from the vehicles and any occupied buildings. Stay a safe distance away.

Class 2 (Compressed Gases). If compressed gas is leaking from your vehicle, warn others of the danger. Only permit those involved in removing the hazard or wreckage to get close. You must notify the shipper if compressed gas is involved in any accident.

Unless you are fueling machinery used in road construction or maintenance, do not transfer a flammable compressed gas from one tank to another on any public roadway.

Class 3 (Flammable Liquids). If you are transporting a flammable liquid and have an accident or your vehicle breaks down, prevent bystanders from gathering. Warn people of the danger. Keep them from smoking.

Never transport a leaking cargo tank farther than needed to reach a safe place. Get off the roadway if you can do so safely. Don't transfer flammable liquid from one vehicle to another on a public roadway except in an emergency.

Class 4 (Flammable Solids) and Class 5 (Oxidizing Materials). If a flammable solid or oxidizing material spills, warn others of the fire hazard. Do not open smoldering packages of flammable solids. Remove them from the vehicle if you can safely do so. Also, remove unbroken packages if it will decrease the fire hazard.

Class 6 (Poisonous Materials and Infectious Substances). It is your job to protect yourself, other people, and property from harm. Remember that many products classed as poison are also flammable. If you think a Division 2.3 (poison gases) or Division 6.1 (poison materials) might be flammable, take the added precautions needed for flammable liquids or gases. Do not allow smoking, open flame, or welding. Warn others of the hazards of fire, of inhaling vapors, or of coming in contact with the poison.

A vehicle involved in a leak of Division 2.3 (poison gases) or Division 6.1 (poisons) must be checked for stray poison before being used again.

If Division 6.2 (infectious substances) package is damaged in handling or transportation, you should immediately contact your supervisor. Packages which appear to be damaged or shows signs of leakage should not be accepted.

Class 7 (Radioactive Materials). If radioactive material is involved in a leak or broken package, tell your dispatcher or supervisor as soon as possible. If there is a spill, or if an internal container might be damaged, do not touch or inhale the material. Do not use the vehicle until it is cleaned and checked with a survey meter.

Class 8 (Corrosive Materials). If corrosives spill or leak during transportation, be careful to avoid further damage or injury when handling the containers. Parts of the vehicle exposed to a corrosive liquid must be thoroughly washed with water. After unloading, wash out the interior as soon as possible before reloading.

If continuing to transport a leaking tank would be unsafe, get off the road. If safe to do so, try to contain any liquid leaking from the vehicle. Keep bystanders away from the liquid and its' fumes. Do everything possible to prevent injury to others.

REQUIRED NOTIFICATION

The National Response Center helps coordinate emergency response to chemical hazards. It is a resource to the local police and firefighters. It maintains a 24-hour toll-free line. You or your employer must phone when any of the following occur as a direct result of a hazardous materials incident:

- A person is killed.
- An injured person requires hospitalization.
- Estimated property damage exceeds $50,000.
- The general public is evacuated for one or more hours.
- One or more major transportation arteries or facilities are closed or shut down for one hour or more.
- Fire, breakage, spillage, or suspected radioactive contamination occurs.
- Fire, breakage, spillage or suspected contamination occurs involving shipment of etiologic agents (bacteria or toxins).
- A situation exists of such a nature (e.g., continuing danger to life exists at the scene of an incident) that, in the judgment of the carrier, should be reported.

National Response Center (800) 424-8802

Persons telephoning the National Response Center should be ready to give:

- Their name.
- Name and address of the carrier they work for.
- Phone number where they can be reached.
- Date, time, and location of incident.
- The extent of injuries, if any.
- Classification, name, and quantity of hazardous materials involved, if such information is available.
- Type of incident and nature of hazardous materials involvement and whether a continuing danger to life exists at the scene.

If a reportable quantity of hazardous substance was involved, the caller should give the name of the shipper and the quantity of the hazardous substance discharged.

Be prepared to give your employer the required information as well. Carriers must make detailed written reports within 30 days of an incident.

911

Call 911 to alert law authorities.

CHEMTREC (800) 424-9300

The Chemical Transportation Emergency Center (CHEMTREC) in Washington also has a 24-hour toll-free line. CHEMTREC was created to provide emergency personnel with technical information about the physical properties of hazardous materials. The National Response Center and CHEMTREC are in close communication. If you call either one, they will tell the other about the problem when appropriate.

Test Your Knowledge

1. If your placarded trailer has dual tires, how often should you check the tires?
2. What is a safe haven?
3. How close to the traveled part of the roadway can you park with Division 1.2 or 1.3 (Explosive B)?
4. How close can you park to a bridge, tunnel, or building with the same load?
5. What type of fire extinguisher must placarded vehicles carry?
6. You're hauling 100 lbs. of Division 4.3 (dangerous when wet) material. Do you need to stop before railroad crossings?
7. At a rest area you discover your hazardous materials shipment is slowly leaking from the vehicle. There's no phone around. What should you do?
8. What is the Emergency Response Guide (ERG)?

These questions may be on your test. If you are unable to answer them all, re-read Sections 9.6 and 9.7.

Table A

(**Note:** You will not be tested on the numbers in this table.)

Radioactive Separation Table

Do not leave radioactive yellow - II or yellow - III labeled packages near people, animals, or film longer than shown in this table.

TOTAL TRANSPORT INDEX	MINIMUM DISTANCE IN FEET TO NEAREST UNDEVELOPED FILM					TO PEOPLE OR CARGO COMPARTMENT PARTITIONS
	0-2 Hours	2-4 Hours	4-8 Hours	8-12 Hours	Over 12 Hours	
None	0	0	0	0	0	0
0.1 to 1.0	1	2	3	4	5	1
1.1 to 5.0	3	4	6	8	11	2
5.1 to 10.0	4	6	9	11	15	3
10.1 to 20.0	5	8	12	16	22	4
20.1 to 30.0	7	10	15	20	29	5
30.1 to 40.0	8	11	17	22	33	6
40.1 to 50.0	9	12	19	24	36	

Table B

(**Note:** You will not be tested on this table.)

TABLE OF HAZARD CLASS DEFINITIONS

Kinds of Hazardous Materials

Hazardous materials are categorized into nine major hazard classes and additional categories for consumer commodities and combustible liquids. The classes of hazardous materials are as follows:

CLASS	CLASS NAME	EXAMPLE
1	Explosives	Ammunition, Dynamite, Fireworks
2	Gases	Propane, Oxygen, Helium
3	Flammable	Gasoline Fuel, Acetone
4	Flammable Solids	Matches, Fusees
5	Oxidizers	Ammonium Nitrate, Hydrogen Peroxide
6	Poisons	Pesticides, Arsenic
7	Radioactive	Uranium, Plutonium
8	Corrosives	Hydrochloric Acid, Battery Acid
9	Miscellaneous Hazardous Materials	Formaldehyde, Asbestos
None	ORM-D (Other Regulated Material-Domestic)	Hair Spray or Charcoal
None	Combustible Liquids	Fuel Oils, Lighter Fluid

Hazardous Materials Glossary

This glossary presents definitions of certain terms used in this section. A complete glossary of terms can be found in the federal Hazardous Materials Rules (49 CFR 171.8). You should have an up-to-date copy of these rules for your reference.

(**Note:** You will not be tested on this glossary.)

Sec. 171.8 Definitions and abbreviations.

Bulk packaging means a packaging, other than a vessel, or a barge, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment and which has:

(1) A maximum capacity greater than 450 L (119 gallons) as a receptacle for a liquid;

(2) A maximum net mass greater than 400 kg (882 pounds) or a maximum capacity greater than 450 L (119 gallons) as a receptacle for a solid; or

(3) A water capacity greater than 454 kg (1,000 pounds) as a receptacle for a gas as defined in Sec. 173.115.

Cargo tank means a bulk packaging which:

(1) Is a tank intended primarily for the carriage of liquids or gases and includes appurtenances, reinforcements, fittings, and closures (for "tank", see 49 CFR 178.345-1(c), 178.337-1, or 178.338-1, as applicable);

(2) Is permanently attached to or forms a part of a motor vehicle, or is not permanently attached to a motor vehicle but which, by reason of its size, construction, or attachment to a motor vehicle is loaded or unloaded without being removed from the motor vehicle; and

(3) Is not fabricated under a specification for cylinders, portable tanks, tank cars, or multi-unit tank car tanks.

Carrier means a person engaged in the transportation of passengers or property by:

(1) Land or water as a common, contract, or private carrier, or

(2) Civil aircraft.

Consignee means the business or person to whom a shipment is delivered.

Division means a subdivision of a hazard class.

EPA means U.S. Environmental Protection Agency.

FMCSR means the Federal Motor Carrier Safety Regulations.

Freight container means a reusable container having a volume of 64 cubic feet or more, designed and constructed to permit being lifted with its contents intact and intended primarily for containment of packages (in unit form) during transportation.

Fuel tank means a tank, other than a cargo tank, used to transport flammable or combustible liquid or compressed gas for the purpose of supplying fuel for propulsion of the transport vehicle to which it is attached, or for the operation of other equipment on the transport vehicle.

Gross weight or Gross mass means the weight of a packaging plus the weight of its contents.

Hazard class means the category of hazard assigned to a hazardous material under the definitional criteria of Part 173 and the provisions of the Sec. 172.101 Table. A material may meet the defining criteria for more than one hazard class, but is assigned to only one hazard class.

Hazardous materials means a substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. The term includes hazardous substances, hazardous wastes, marine pollutants, and elevated temperature materials as defined in this section, materials designated as hazardous under the provisions of Sec. 172.101 and 172.102, materials that meet the defining criteria for hazard classes and divisions in Part 173, and any quantity of a material listed as a select agent or toxin under 42 CFR part 73.

Hazardous substance means a material, including its mixtures and solutions, that:

(1) Is listed in Appendix A to Sec. 172.101;
(2) Is in a quantity, in one package, which equals or exceeds the reportable quantity (RQ) listed in Appendix A to Sec. 172.101; and
(3) When in a mixture or solution -
  (i) For radio nuclides, conforms to paragraph 6 of Appendix A to Sec. 172.101.
  (ii) For other than radio nuclides, is in a concentration by weight which equals or exceeds the concentration corresponding to the RQ of the material, as shown in the following table:

RQ POUNDS (KILOGRAMS)	CONCENTRATION BY WEIGHT	
	Percent	PPM
5,000 (2270)	10	100,000
1,000 (454)	2	20,000
100 (45.4)	0.2	2,000
10 (4.54)	0.02	200
1 (0.454)	0.002	20

This definition does not apply to petroleum products that are lubricants or fuels (see 40 CFR 300.6).

Hazardous waste, for the purposes of this chapter, means any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR Part 262.

Limited quantity, when specified as such in a section applicable to a particular material, means the maximum amount of a hazardous material for which there may be specific labeling or packaging exception.

Marking means the descriptive name, identification number, instructions, cautions, weight, specification, or UN marks or combinations thereof, required by this subchapter on outer packagings of hazardous materials.

Mixture means a material composed of more than one chemical compound or element.

Name of contents means the proper shipping name as specified in Sec. 172.101.

Non-bulk packaging means a packaging which has:

(1) A maximum capacity of 450 L (119 gallons) as a receptacle for a liquid;
(2) A maximum net mass less than 400 kg (882 pounds) and a maximum capacity of 450 L (119 gallons) or less as a receptacle for a solid; or
(3) A water capacity greater than 454 kg (1,000 pounds) or less as a receptacle for a gas as defined in Sec. 173.115.

N.O.S. means not otherwise specified.

Outage or ullage means the amount by which a packaging falls short of being liquid full, usually expressed in percent by volume.

Portable tank means a bulk packaging (except a cylinder having a water capacity of 1,000 pounds or less) designed primarily to be loaded onto, or on, or temporarily attached to a transport vehicle or ship and equipped with skids, mountings, or accessories to facilitate handling of the tank by mechanical means. It does not include a cargo tank, tank car, multi-unit tank car tank, or trailer carrying 3AX, 3AAX, or 3T cylinders.

Proper shipping name means the name of the hazardous materials shown in Roman print (not italics) in Sec. 172.101.

P.s.i. or psi means pounds per square inch.

P.s.i.a. or psia means pounds per square inch absolute.

Reportable quantity (RQ) means the quantity specified in Column 3 of the Appendix to Sec. 172.101 for any material identified in Column 1 of the Appendix.

RSPA means the Research and Special Programs Administration, U.S. Department of Transportation, Washington, DC 20590.

Shipper's certification means a statement on a shipping paper, signed by the shipper, saying he/she prepared the shipment properly according to law.

> "This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations or the Department of Transportation."
> **or**
>
> "I hereby declare that the contents of this consignment are fully and accurately described above the proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by * according to applicable international and national government regulations."
>
> * **words may be inserted here to indicate the mode of transportation (rail, aircraft, motor vehicle, vessel)**

Shipping paper means a shipping order, bill of lading, manifest, or other shipping document serving a similar purpose and containing the information required by Sec. 172.202, 172.203, and 172.204.

Technical name means a recognized chemical name or microbiological name currently used in scientific and technical handbooks, journals, and texts.

Transport vehicle means a cargo-carrying vehicle such as an automobile, van, tractor, truck, semi-trailer, tank car, or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, rail car, etc.) is a separate transport vehicle.

UN standard packaging means a specification packaging conforming to the requirements in Subpart L and M of Part 178.

UN means United Nations.

Section 10: Pre-Trip for School Bus

This section covers:

- Internal and External Inspections

During the pre-trip inspection, you must show that the vehicle is safe to drive. You will need to walk around the vehicle and point to or touch each item and explain to the examiner what you are checking and why. You will NOT need to crawl under the vehicle. Opening the hood is the driver's option.

10.1 All Vehicles

Study the following vehicle parts for the type of vehicle you will be using during the CDL skills tests. You should be able to identify each part and tell the examiner what you are looking for or inspecting.

ENGINE COMPARTMENT (ENGINE OFF)

Leaks/Hoses

- Look for puddles on the ground.
- Look for dripping fluids on underside of engine and transmission.
- Inspect hoses for condition and leaks.

Oil Level

- Indicate where dipstick is located.
- Check oil level to make sure it is within safe operating range. Level must be above refill mark.

Coolant Level

- Inspect reservoir sight glass, or
- (If engine is not hot), remove radiator cap and check for visible coolant level.

Power Steering Fluid

- Indicate where power steering fluid dipstick is located.
- Check for adequate power steering fluid level. Level must be above refill mark.

Engine Compartment Belts

- Check the following belts for snugness (up to 3/4 inch play at center of belt), cracks, or frays:
  - Power steering belt.
  - Water pump belt.
  - Alternator belt.
  - Air compressor belt.

Note: If any of the components listed above are not belt driven, you must:

- Tell the examiner which component(s) are not belt driven.
- Make sure component(s) are operating properly, are not damaged or leaking, and are **mounted securely**.

CAB CHECK/ENGINE START

Clutch/Gearshift

- Depress clutch.
- Place gearshift lever in neutral (or park, for automatic transmissions).
- Start engine, then release clutch slowly.

Oil Pressure Gauge

- Make sure oil pressure gauge is working.
- Check oil pressure gauge to make sure it shows increasing or normal oil pressure or that the warning light goes off.
- If equipped, oil temperature gauge should begin a gradual rise to the normal operating range.

Temperature Gauge

- Make sure the temperature gauge is working.
- Temperature should begin to climb to the normal operating range or temperature light should be off.

Ammeter/Voltmeter

- Check gauges to make sure they show the alternator and/or generator is charging or that warning light is off.

Air/Vacuum Gauge

- Check for proper operation of, and acceptable readings on air and/or vacuum gauge(s). See air brake check on pages 10-2 and 10-3.

WISCONSIN

Speedometer

- Check for speedometer - should be present, not obscured or obviously broken.

WISCONSIN

Mirrors and Windshield

- Mirrors should be clean and adjusted properly from the inside.
- Windshield should be clean with no illegal stickers, obstructions, or damage to the glass.

Emergency Equipment

- Check for spare electrical fuses.

Note: If the vehicle is not equipped with electrical fuses, you must mention this to the examiner.

- Check for three red reflective triangles.
- Check for a properly charged and rated fire extinguisher.
- Sixteen item first aid kit, per Trans. 300.42, Wisconsin Administration Code.

Steering Play

- Non-power steering: Check for excessive play by turning steering wheel back and forth. Play should not exceed 10 degrees (or about two inches on a 20-inch wheel).
- Power steering: With the engine running, check for excessive play by turning the steering wheel back and forth. Play should not exceed 10 degrees (or about two inches on a 20-inch wheel) before front left wheel barely moves.

Wipers/Washers

- Wiper arms and blades should be secure, not damaged, and operate smoothly.
- If equipped, windshield washers must operate correctly.

Lighting Indicators

- Test dash indicators to make sure they work when the corresponding lights are turned on:
  - Left turn signal.
  - Right turn signal.
  - 4-way emergency flashers.
  - High beam headlight.
  - Strobe light indicator, if equipped.
  - Alternately flashing red lights indicator.

Horn

- Check air horn and/or electric horn to make sure they work.

Heater/Defroster

- Test the heater and defroster are in working order.

Emergency Exit

- Make sure all emergency exits are not damaged, operate smoothly, and close securely from the inside.
- Check any emergency exit warning devices to make sure they work.

Seating

- Look for broken seat frames and check that seat frames are firmly attached to the floor.
- Make sure seat cushions are attached securely to the seat frames.

Parking Brake Check

- Apply parking brake only and make sure it will hold the vehicle by shifting into a lower gear and gently pulling against the brake.

Hydraulic Brake Check

- With the engine running, apply firm pressure to the brake pedal and hold for five seconds. The brake pedal should not move (depress) during the five seconds.
- If equipped with a hydraulic brake reserve (back-up) system, with the key off, depress the brake pedal and listen for the sound of the reserve system electric motor.
- Make sure the warning buzzer or light is off.
- Check the service (foot) brake operation. Move the vehicle forward slowly (about 5 mph) and apply the brakes firmly. Note any vehicle “pulling” to one side or unusual feel or delayed stopping action.

Air Brake Check (air brake equipped vehicles only)

- Failure to perform an air brake check will result in an automatic failure of the Vehicle Inspection Test. Air brake safety devices vary. However, this procedure is designed to make sure any safety device operates correctly as air pressure drops from normal to a low-air condition. For safety purposes, in areas where an incline is present, you will use wheel chocks during the air brake check. The proper procedures for inspecting the air brake system are:

(L) - LEAKS

Test air leakage rate (static check). With a fully-charged air system (typically 120 psi), turn off the engine, chock the wheels, release (push in) the parking brake button and time the air pressure drop. After the initial pressure drop, the loss rate should be no more than two psi in one minute for single vehicles.

(A) - ALARM

Test air brake system for leaks. With parking brake released (pushed in), apply firm pressure to the service brake pedal. Watch the air supply gauge and listen for leaks. After the initial pressure drop, the loss rate for single vehicles should be no more than three psi in one minute. If the air loss rate exceeds these figures, have the air system repaired before operating.

Test low pressure warning alarm and/or signal. Turn the key to the on position. Rapidly apply and release the service brake pedal to reduce air tank pressure. The low air pressure warning signal must come on before the pressure drops to less than 60 psi in the air tank.

(B) - BUTTON

If the warning alarm/signal doesn't work, you could be losing air pressure without knowing it. This could cause the spring brakes to activate suddenly. Only limited braking can be done before the spring brakes come on.

Check that the spring brakes come on automatically. Continue to rapidly apply and release the service brake pedal to further reduce air tank pressure. The parking brake button should pop out when the air pressure falls to the manufacturer's specification (usually between 20 to 40 psi). This causes the spring brakes to come on.

Check rate of air pressure buildup. When the engine is operating at 1,800 RPM, the pressure should build from 85 to 100 psi within 45 seconds in dual air systems. (If the vehicle has larger than minimum air tanks, the buildup time can be longer and still be safe. Check the manufacturer's specifications.)

If air pressure does not build up fast enough, your pressure may drop too low during driving, requiring an emergency stop. Don't drive until you get the problem fixed.

Safety Belt

- Make sure the safety belt is securely mounted, adjusts, and latches properly.

Lights/Reflectors

- Verify that all external lights and reflective equipment are clean and functional. Light and reflector checks include:
  - Clearance lights (red on rear, amber elsewhere).
  - Headlights (high and low beams).
  - Taillights.
  - Turn signals.
  - 4-way flashers.
  - Brake lights.
  - Red reflectors (on rear) and amber reflectors (elsewhere).
  - Strobe lights, if equipped.
  - Stop lights.
  - Alternately flashing red lights.

Note: Checks of brake, turn signal and four-way flasher functions must be done separately. You may ask the examiner for help checking lights.

Stop Arm

- Check the stop arm to make sure it is mounted securely to the frame of the vehicle. Also, check for loose fittings, wiring and damage.

10.3 External Inspection (School Bus)

STEERING

Steering Box/Hoses

- Verify the steering box is securely mounted and not leaking. Look for any missing nuts, bolts, and cotter keys.

- Check for power steering fluid leaks or damage to power steering hoses.

Steering Linkage

- See that connecting links, arms, and rods from the steering box to the wheel are not worn or cracked.

- Check joints and sockets to make sure they are not worn or loose and that there are no missing nuts, bolts, or cotter keys.

SUSPENSION

Springs/Air/Torque

- Look for missing, shifted, cracked, or broken leaf springs.

- Look for broken or distorted coil springs.

- If vehicle is equipped with torsion bars, torque arms, or other types of suspension components, check that they are not damaged and are mounted securely.

- Air ride suspension should be checked for damage and leaks.

Mounts

- Look for cracked or broken spring hangers, missing or damaged bushings, and broken, loose, or missing bolts, U-bolts or other axle mounting parts. (The mounts should be checked at each point where they are secured to the vehicle frame and axle[s]). This includes mounts used for air ride systems.

Shock Absorbers

- Verify shock absorbers are secure and have no leaks.

Note: Be prepared to perform the same suspension components inspection on every axle.

BRAKES

Slack Adjustors

- Look for broken, loose, or missing parts.

- The angle between the push rod and adjustor arm should be a little over 90 degrees when the brakes are released, and not less than 90 degrees when the brakes are applied.

- When pulled by hand, the push rod should not move more than one inch (with the brakes released).

Brake Chambers

- Check brake chambers to make sure they are not leaking, cracked, or dented and are mounted securely.

Brake Hoses/Lines

- Look for cracked, worn, or leaking hoses, lines, and couplings.

Brake Drum or Rotor

- Check for cracks, dents, or holes. Also check for loose or missing bolts.

- Brake linings or pads (where visible) should not be worn dangerously thin.

Brake Linings

- On some brake drums, there are openings where the brake linings can be seen from outside the drum. For this type of drum, check that a visible amount of brake lining is showing.

Note: Be prepared to perform the same brake components inspection on every axle.

WHEELS

Rims

- Check for damaged or bent rims. Rims cannot have welding repairs.

Tires

- The following items must be inspected on every tire:

  - **Tread depth**: Check for minimum tread depth (4/32 on steering axle tires, 2/32 on all other tires).

  - **Tire condition**: Check tread for even wear and look for cuts or other damage to tread or sidewalls. Also, make sure valve caps and stems are not missing, broken, or damaged.

  - **Tire inflation**: Check for proper inflation by using a tire gauge, or by striking tires with a mallet or other similar device.

Hub Oil Seals/Axle Seals

- See that hub oil/grease seals and axle seals are not leaking and, if wheel has a sight glass, oil level is adequate.

Lug Nuts

- Check for the presence of all lug nuts. Verify they are free of cracks and distortions, and show no signs of looseness such as rust trails or shiny threads.

- Make sure all bolt holes are not cracked or distorted.

Spacers

- If equipped, verify spacers are not bent, damaged, or rusted through.

- Spacers should be evenly centered, with the dual wheels and tires evenly separated.

Note: Be prepared to perform the same wheel inspection on every axle.

SIDE OF VEHICLE

Passenger Entry/Lift

- Check to make sure the entry door is not damaged, operates smoothly, and closes securely from the outside.
- Hand rails are secure and the step light is working, if equipped.
- The entry steps must be clear with the treads not loose or worn excessively.
- If equipped with a lift for the disabled, look for leaking, damage, or missing parts and explain how lift should be checked for correct operation. Lift must be fully retracted and latched securely.

Mirror(s)

- Check mirror(s) and mirror brackets to make sure they are not damaged and are mounted securely with no loose fittings.

Fuel Tank

- Verify tank(s) are secure, cap(s) are tight, and that there are no leaks from tank(s) or lines.

Battery/Box

- Wherever located, see that battery(s) are secure, connections are tight, and cell caps are present.
- Battery connections should not show signs of excessive corrosion.
- Battery box and cover or door must be secure.
- Baggage door must be secure, if equipped.

Drive Shaft

- Verify drive shaft is not bent or cracked.
- Couplings should be secure and free of foreign objects.

Exhaust System

- Check system for damage and signs of leaks such as rust or carbon soot.
- System should be connected tightly and mounted securely.

Frame

- Look for cracks, broken welds, holes or other damage to the longitudinal frame members, cross members, box, and floor.

REAR OF VEHICLE

Splash Guards

- If equipped, check splash guards or mud flaps to make sure they are not damaged and are mounted securely.

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- Verify doors and hinges are not damaged and that they open, close, and latch properly from the outside, if equipped.
- If equipped with a cargo lift, look for leaking, damaged or missing parts and explain how it should be checked for correct operation.
- Lift must be fully retracted and latched securely.

Note: All drivers may use this aid during their pre-trip inspection test. Be prepared to point to or touch the listed items and explain "what" you would look for.

Note: Shaded components will not be required on the pre-trip inspection test, but should be checked on a daily basis.

ENGINE COMPARTMENT

- alternator mounted securely & belt *
- water pump mounted securely & belt *
- air compressor mounted securely & belt *

  * if gear driven, mention to the examiner
- coolant, oil and power steering levels
- leaks and hoses

VEHICLE FRONT

- steering box and steering linkage
- springs and spring mounts
- shock absorber
- brake hose or line
- brake drum or rotor
- tire and rim
- lug nuts and hub oil seal

  If air brake equipped
  - brake hose
  - slack adjustor
  - brake chamber

VEHICLE SIDE

- mirror and passenger entry
- fuel tank mounted securely, leaks and cap
- frame and drive shaft
- exhaust
- battery and/or baggage door
- springs or air bag
- spring mounts or air bag mounts
- shock absorber
- brake hose or line
- brake drum or rotor
- tires and rim
- spacer
- lug nuts and hub oil seal

VEHICLE SIDE (CONTINUED)

If air brake equipped
- brake hose
- slack adjustor
- brake chamber

VEHICLE REAR

- door and hinges (bus emergency exit)
- splash guards and reflectors

VEHICLE LIGHTS

- headlights (high and low beam)
- front signal and 4-way flashers
- front clearance
- side clearance and reflectors
- rear tail
- rear signals and 4-way flashers
- rear clearance and brake lights
- red flashing lights and stop arm

INSIDE VEHICLE

- clutch (depressed) and gearshift (neutral)
- all gages (oil, voltmeter, air/vacuum, etc.)
- speedometer
- light indicators
- steering wheel play
- horn and wipers
- mirrors adjusted and windshield condition
- heater and defroster
- safety/emergency equipment
- emergency exit(s), buzzer(s) and seating
- parking brake
- brake system check (see back side of this
- page for correct procedure)
- service (foot) brake check (see back side of this page for correct procedure)

Note: All drivers are required to complete a brake system check correctly in order to pass their pre-trip inspection. If your vehicle is air brake equipped, you must locate and identify all air brake system components, test your service brakes and correctly perform the LAB in order to pass the air brake portion of the pre-trip inspection. The correct process is listed below according to the vehicles braking system.

BRAKE SYSTEM CHECK FOR HYDRAULIC BRAKES
With the engine running, apply firm pressure to the service (foot) brake pedal and hold for five seconds. The brake pedal should not move.

BRAKE SYSTEM CHECK FOR AIR BRAKES
Check for leaks (L), warning alarm/signal (A) and for the button (B). This test is commonly referred to as the LAB inspection.

(L) - LEAKS
With a fully charged air system (typically 120 psi), turn off the engine, chock the wheels, release (push in) the parking brake button (all vehicles). Apply firm pressure to the service (foot) brake pedal. Watch the air supply gauge and listen for air leaks. After the initial pressure drop, the loss rate for single vehicles should be no more than 3 psi in one minute. If the air loss rate exceeds that figure, your air brake system will need to be repaired prior to continuing with the skills test.

(A) - ALARM/SIGNAL
Turn the key to the on position. Rapidly apply and release (fanning) the service (foot) brake pedal to reduce air tank pressure. The low air pressure warning signal (light, buzzer, etc.) must come on before the pressure drops to less than 60 psi in the air tank.

(B) - BUTTON
Continue to rapidly apply and release (fanning) the service (foot) brake pedal to further reduce air tank pressure. The parking brake button (all vehicles) should pop out when the air pressure falls to the manufacturer's specification (usually between 20 to 40 psi). This causes the spring brakes to come on.

TEST SERVICE (FOOT) BRAKES PRIOR TO OPERATING
If your vehicle has **air brakes**, build up your air pressure to normal operating range (typically 120 psi), release (push in) the parking brake button (all vehicles). Move forward slowly (about 5 mph), and apply the service (foot) brake pedal firmly. Note any vehicle "pulling" to one side, unusual feel, or delayed stopping action.

If your vehicle has **hydraulic brakes**, move forward slowly (about 5 mph), and apply the service (foot) brake pedal firmly. Note any vehicle "pulling" to one side, unusual feel or delayed stopping action.

Other Information

The Department of Transportation intends for the products and services it offers to be accessible to all. If you need accommodations or do not understand any part of this publication, please contact any Division of Motor Vehicles (DMV) Service Center.

Note: Information in this and other handbooks and manuals published by the Division of Motor Vehicles is not all inclusive and is subject to change due to law changes. For the latest information contact a DMV Service Center.

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